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Self-compassion as a mediator between coping styles and psychopathology

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Self-Compassion as a Mediator between Coping Styles and Psychopathology

BY

Yamini Bellare

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Abstract

Self-compassion helps an individual to respond to suffering or pain with mindfulness, common humanity and self-kindness. It has been identified as a protective factor, which promotes physical and mental health. Self-compassion was examined as a potential mediator in the relationship between coping strategies and psychopathology. A literature review of the existing research on self-compassion and its links with specific coping strategies, depression and anxiety is presented. Findings indicate that self-compassion partially mediates the relationship between avoidance-oriented coping and social-anxiety. Self-compassion also was associated with lower levels of psychopathology and avoidance-oriented coping and higher use of adaptive problem-focused coping. The probable explanations behind the findings, suggestions for future research and the clinical implications are also presented.

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Self-Compassion as a Mediator between Coping Styles and Psychopathology

Self-compassion is a relatively new area of study; it was introduced to the West and defined by Neff (2003a). Recent research has revealed that self-compassion is a personality trait and varies in levels across individuals (Leary, Tate, Adams, Allen, & Hancock, 2007). It has also been linked to physical and mental well-being (Neff, 2003b; Barnard & Curry, 2011). At present, self-compassion has not been studied in conjunction with coping and psychopathology. For example, Using an adaptive coping strategy (e.g., using relaxation during times of stress) could help an individual to enhance self-compassion that could in turn reduce the risk of developing depressive or anxiety symptoms. Thus, this paper will review the growing literature on self-compassion and how it relates to coping strategies and internalizing symptoms (i.e., anxiety and depression). A study that examined a model whereby self-compassion serves as a mediator in the relationship between coping strategies and internalizing symptoms will be described.

Self-Compassion

Self-compassion basically is compassion towards oneself (Neff, 2003a). To understand the term self-compassion, it is important to comprehend the connotation of the term compassion. A compassionate individual is mindful of and is moved by the pain and anguish of another individual. Indirectly experiencing suffering motivates the person to alleviate the pain. Such an individual not only endeavors to alleviate the suffering but also attempts to substitute it with happiness, without judging the person negatively (Neff, 2003a).

In recent times, Buddhist concepts have greatly influenced Western ideology. Third wave cognitive-behavioral techniques such as Mindfulness Based Cognitive Therapy, Dialectical Behavioral Therapy, and Acceptance and Commitment Therapy borrow several

concepts from Eastern Philosophy. These therapies place emphasis on aspects such as acceptance, mindfulness, dialecticism, spiritual values and interpersonal relationships (Hayes, 2004)

Buddhist philosophy suggests that every individual should spontaneously respond to another individual's misery with compassion. The Buddhist philosophy posits that compassion consists of four aspects (Reyes, 2011). "Karuna" is the ability to aim for a perpetual rather than a fleeting state of contentment. It is also the ability to genuinely respond to one's anguish (Yao, 2008). "Prajna" literally means the insight into the connotation of one's suffering (Florida, 2002). "Maitri" means genuine kindness towards others (Rinpoche, 1994). Finally, "Upaya" is the ability to develop and maintain a "compassionate state of mind" and compassion towards all "sentient beings" (Florida, 2002).

Though Western ideology defines compassion in terms of concern for the suffering of others, Buddhism does not differentiate between compassion towards others and compassion towards oneself (Neff, 2003a). Eastern philosophy rejects the boundary between the self and the other, claiming that both entities are cohesive (Hanh, 1997).

Self-compassion is the person's response towards his own state of suffering with astuteness, kind-heartedness, and mindfulness. It is activated in response to pain or failure (Neff, 2003a). Individuals who are self-compassionate respond to failure and suffering by being warm and accepting of themselves. They do not judge their flaws or reprimand themselves with self-effacement. Thus, being self-compassionate comprises of respecting oneself and pardoning one's own imperfections and failures by acknowledging the fact that no human being is devoid of flaws. It is assumed that suffering is caused by factors that are external to the individual and that the individual cannot be blamed for the same; however, self-compassion can also be

crucial when a person's shortfalls cause distress. The individual is so stirred by his own distress that it strengthens his resolve to mitigate his anguish.

Components of Self-Compassion. Borrowing from work by several Buddhist scholars (e.g., Bennett-Goleman, 2001; Brach, 2003; Goldstein & Kornfield, 1987; Salzberg, 1997), Neff (2003a) postulated that self-compassion has three major interconnected sub-components: self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus over-identification.

Self-kindness versus self-judgment. Being kind to oneself includes asserting that one cannot be deemed as unlovable when one faces failure. Instead we deserve affection, benevolence and forgiveness when we experience suffering due to personal inadequacies. Individuals have a strong tendency to set high standards of performance which are unachievable, the resulting disappointment and self-criticism could compel the person to give up on his goals (Neff, 2003b). Self-compassion helps us to forgive our shortcomings and encourages us to gradually modify our behaviors in a way that helps us to set realistic goals (Neff, 2003b). Being extremely critical and berating oneself in response to disappointment seems like a natural and acceptable response. Feeling dejected by failure compels us to reject our thoughts, emotions and feelings as erroneous. Self-effacement causes further suffering. For example individuals with bulimia nervosa experience extreme guilt and self-criticism and negative self talk after a binge-eating episode which leads to purging. To be self-kind we must identify and attenuate our feelings of self-deprecation. Self-kindness does not entail being ignorant of our flaws, instead it helps us to acknowledge them without being punitive or judgmental. Some situations might be difficult and uncontrollable. In such cases, it is

immensely beneficial to offer unconditional positive regard, positive self-talk, and "soothing comfort" (Neff & Pommier, 2012; p. 3), to oneself.

Common humanity versus isolation. Buddhism dictates that all human beings are closely associated. Though each individual sees himself as exclusive, at the very core each person longs to be connected with other individuals (Barnard & Curry, 2011). Connectedness requires the acknowledgement that we are a part of a world where each person shares a connection with the other. A person experiencing distress or failure sees his suffering as unique. For example, the origin of the fear of speaking in public can be traced to the fear of denunciation and seclusion. This feeling of isolation could worsen distress and lead to maladaptive coping. Such a fear can be countered by the understanding that the audience members are not perfect and have their own inadequacies like the speaker. A person who assumes that he alone is struggling with adversity and erroneously believes that other individuals are leading perfectly 'happy and normal lives', this comparison further increases discomfort and feelings of isolation (Neff & Pommier, 2012). Realizing that all humans are inherently flawed and are equally likely to commit mistakes helps reduce self-blame and self-criticism. We need to forgive ourselves for our shortcomings and attempt to modify our behaviors without being too harsh (Neff, 2003b). The broadened viewpoint brought about by common humanity helps us grasp the fact that "suffering is universal" and all individuals experience psychological and bodily distress. Hefferman and colleagues (2010) suggest that healthy individuals can acknowledge sociocultural and biological factors that make us unique; they also manage to balance their uniqueness with the understanding that all humans are closely connected.

Mindfulness versus over identification or avoidance. Mindfulness is the ability of the individual to focus on the current moment and fully acknowledge his/her emotions without attempting to modify or being adversely affected by them. It includes the act of observing and carefully labeling emotions that are currently being experienced (Kabat-Zinn, 1982). Mindfulness can be conceptualized as the middle ground between over-identification and a total evasion of one's emotions. A person who develops a heightened focus on his/her emotions tends to ruminate on his/her perceived subjective imperfections. Individuals who lack mindfulness blow their failures out of proportion, perceiving themselves as incapable of achieving their goals and contentment. The other extreme is when the individual completely obliterates the negative emotion out of his/her awareness. Both extremes could increase discomfort and stress (Barnard & Curry, 2011). A mindful individual views his/her current experience in a clear and composed manner (Neff, 2009). According to Neff, mindfulness allows the individual to momentarily observe himself/herself from the outside in an unbiased and objective manner, this helps to acknowledge his/her emotions and observe them in a neutral way.

Interplay between these components

Neff (2003a) suggested that, though the three components of self-compassion are distinct, they are essentially interconnected, and each component enhances the effectiveness of the other. Mindfulness helps us to observe and experience our negative emotions without being adversely affected by them; the act of separating ourselves from our negative experiences gives us the opportunity to practice and boost feelings of self-kindness and common humanity. Mindfulness reduces the tendency to criticize ourselves which in turn attenuates self-effacement and thereby enhances self-acceptance and self-kindness (Jopling, 2000). Being

self-centered heightens loneliness and disconnectedness; the ability to take an objective assessment of one's experiences makes it possible to acknowledge common humanity (Neff, 2003b).

Self-kindness and connectedness enhances mindfulness, which encourage the individual to reduce self-criticism and helps to develop feelings of self-acceptance. Self-criticism may force the person to focus on his/her past failures or fear future failures; this process prevents the individual from a clear present focus. Self-kindness can help reduce the embarrassment of being flawed thus enhancing mindfulness. A positive attitude towards self protects oneself from being overwhelmed by negative emotions making it possible to be mindful (Neff, 2003b). Accepting the fact that all individuals could experience negative life events can help the individual observe his/her own negative emotions objectively instead of being incapacitated by them. Blaming oneself for one's negative life situation could heighten loneliness; this keen awareness of oneself could be counteracted by self-kindness (Brown, 1998), which in turn enhances the feeling of common humanity (Fromm, 1963). Common humanity and self-kindness combine, to prevent the individual from blaming others or themselves for their distress; instead, they could objectively observe their emotions with mindful awareness thereby reducing subjective distress.

Measuring Self-Compassion

All published research to date on self-compassion has employed the Self-Compassion Scale developed by Neff (2003a). Because this scale currently is the only validated questionnaire used to assess self-compassion, the psychometrics of the Self-Compassion Scale will be discussed now in detail. The scale measures the three components of self-compassion outlined previously. Each component has two parts - presence of one entails the negation of the

other. The Self-Compassion Scale has six subscales: self kindness vs. self criticism, seeing ones fallibility as a part of the larger human condition vs. isolation, holding painful thoughts or feelings in mindful awareness vs. over-identifying with them. However, each individual receives a single score indicating the overall level of self-compassion.

The researchers computed internal consistency reliability estimates (α) for the six subscales ranging from .77 to .81. For the 26-item scale, internal consistency reliability (α) was found to be .92 (Neff, 2003a). The three week test-retest reliability of .93 was obtained. The test-retest reliability index for each of the subscales was found to be in the range of .80 to .88 (Neff, 2003a).

The scale also has demonstrated construct validity. First, undergraduates in the highest quartile of self-compassion had significantly higher mean scores on self-reported kindness to self and others than students who scored in the lowest quartile on self-compassion.
To test construct validity, researchers administered the self-compassion scale to two different groups (Neff, 2003a) - Buddhists practicing Vipassana (a meditation technique that involves a conscious attempt to develop mindfulness, compassion and interdependence) and a group of undergraduate students. It was found that practitioners of Vipassana scored significantly higher, and the longer an individual had been practicing this method, the higher were his/her self compassion scores (Neff, 2003a). The ability of the scale to differentiate between the two groups demonstrated strong construct validity.

Distinguishing Self-Compassion from other Self- Concepts

Though self-compassion is an independent concept, it does seem to be similar to other self-oriented concepts, such as self-esteem, narcissism, self-pity, passivity and so forth. Thus it is

important to differentiate self-compassion from other related concepts to document that it is an area worth studying.

Self-compassion and self-esteem share a moderate correlation ranging from r =.56 (Leary et al., 2007) to r =.68 (Neff & Vonk, 2009). Self-compassion, however, does not entail comparing ones performance with those of others. The difference between the two constructs is the aspect of self-evaluation, which is present in self-esteem and absent in self-compassion (Neff & Vonk, 2009). Self-compassion is not associated with narcissism (r = -.03; Neff & Vonk, 2009), but self-esteem is correlated positively with narcissism (r = .38; Neff & Vonk, 2009). Thus, an individual high on self-compassion recognizes the importance of common humanity and equality and does not consider himself to be above everyone else. Both narcissism and self-esteem are self-oriented concepts; however self-compassion is beneficial not only to the individual, but also to other individuals (Neff, 2003a). Individuals attempt to boost their self-esteem through downward social comparisons and judging others harshly; whereas a person with high levels of self-compassion is kind and compassionate towards himself, and he/she is also capable of extending the same towards others (Neff & Vonk, 2009).

Likewise, self-compassion is discrete from both pity for others and self-pity. When an individual experiences pity for another, he/she does not empathize with the individual's suffering; instead he/she feels disengaged and maintains a distance from the individual. The element of common humanity in self-compassion makes the person feel linked to other individuals and accept suffering as a universal phenomenon and respond to him with compassion (Barnard & Curry, 2011).

Self-pity keeps the individual preoccupied with negative affect and personal difficulties. They assume that they are the only ones in the world experiencing pain and

suffering. Feelings of isolation and loneliness worsen negative affect. Self-compassion helps the individual to experience a sense of relatedness with others without any of the biases (Neff & Vonk, 2009).

Over-identification with pain and suffering makes it difficult to experience positive emotions and take a fresh perspective of the situation. Mindfulness prevents the individual from over-identifying with emotions and being overwhelmed. A self-compassionate person maintains a mindful awareness of emotions; this enables the ability to be kind and forgiving towards oneself while making amends to one's maladaptive behaviors (Barnard & Curry, 2011).

Self-compassion prevents the person from developing ego-centric tendencies (i.e., being self-centered). It helps foster kindness and compassion towards oneself in the time of failure or pain; this does not engender self-centeredness because of the component of common humanity. Acknowledging the presence of interconnectedness and equality helps the individual to extend compassion to both himself and to other individuals (Neff, 2003a).

Self-compassionate individuals are not harsh and exacting towards their flaws in response to failure; this does not engender self-righteousness. They are capable of objectively viewing their flaws without being self-justifying (Neff, 2003). Self-compassion motivates the person to engage in, modify and develop adaptive behaviors that help future avoid failures. Thus, by keeping our faults in mindful awareness and gradually modifying maladaptive behaviors, we prevent self-complacency (Brown, 1998).

Self-criticism or self-disparagement exacerbates feelings of loneliness among individuals, after the failure to achieve desired goals. Several studies have revealed that self-critical individuals actively avoid social situations and connecting with other individuals due to

the fear of being judged as being incompetent. Self-critics strive for excessive perfection which might be unachievable; common humanity helps acknowledge that 'insecurities' are a part of the human condition and all individuals experience the same. This encourages them to reach out to other people and attenuate the feelings of insecurity rather than withdrawing from social contact. Self-critical individuals lack mindful awareness of their emotions and thoughts (Neff, 2011). Mental and behavioral disengagement from situations precludes a balanced awareness and an objective view of one's emotional and behavioral responses to situations (Neff, 2003).

Neff and Pommier (2012) attempted to identify the relationship between the construct of self-compassion and 'other focused concern.' Care and concern for others was measured by the concepts: "Compassion for humanity, empathetic concern, perspective taking, personal distress, altruism and forgiveness" (p. 5; Neff & Pommier, 2012). This study aimed to identify how self-compassionate individuals attempt to extend kindness and forgiveness not only to themselves but also towards others. The results of a study using fMRI found that empathy and self-compassion activated the same neural pathways in the brain (Lutz et al., 2008). A strong association was found between other focused concern and self-compassion. However, the strength of the relationship was influenced by age, 'meditation experience,' and sex. Overall, a strong relationship was found between self-compassion and perspective taking. The ability to maintain mindful awareness, common humanity and kindness towards self and others enhances the capacity to take a clear perspective of the other individual's experience of suffering. The ability to experience suffering without being overwhelmed by negative affect helps the individual to experience another individual's pain without being excessively distressed himself. The component of common humanity helps to accept that all individuals are flawed and are vulnerable to making errors. Thus enhancing the capacity to forgive others and oneself. The

relationship between self-compassion and compassion towards humanity, empathetic concern and altruism was found to be stronger among older individuals and those who practiced Buddhist meditation techniques. Neff et al. (2012) suggested that those who practice Buddhist meditation techniques are initiated into developing self-compassion. Older individuals learn about suffering and its origins as they gain more experience (Neff & Pommier, 2012).

In conclusion, although self-compassion overlaps with a number of other constructs, it differs in theoretical ways, some of which have been supported through research studies. However, the body of literature on self-compassion is still in its early stages, and a number of fundamental questions remain about its importance and how it relates to other outcomes. For example, self-compassion has been linked to coping styles, which leads to the question of whether and how it is associated with a person's general well being or to more specific mental health outcomes.

Self -Compassion and Well-Being

Self-compassion has been associated with reduced physical and psychological distress. Surprisingly, while experiencing distress, individuals are more likely to take less care of themselves than they would of their near and dear ones in a similar situation. The components of self-compassion, such as self-kindness, mindfulness and common humanity, help the individual to extend relatively equal levels of care and compassion towards themselves and others (Neff, 2003a). Thus, self-compassion enhances physical and psychological well being; as such, individuals are motivated to engage in healthy self-care practices (Neff, 2003a).

Conceptual Model of Self-Compassion. Reyes (2011) identified the precursors, characteristics and consequences of self-compassion. Suffering is the precursor to self-compassion; it occurs when a person fails to care for himself/herself or experiences the

inability to develop relationships and a lack of independence. Suffering could be brought about by certain events such as the death of a loved one or failure to achieve one's goals, certain situations which involve disagreements or aggression, by emotional responses which include negative affective states such as fear, shame or sadness (Ladner, 2004), psychological suffering due to the inability to cope with trauma, spiritual suffering due to estrangement from a loved one and the community or loss of faith in one's higher power or physical suffering due to bodily diseases or physical pain. Suffering can occur due to a combination of these factors (Ferrel & Coyle, 2008); for example, being diagnosed with a terminal illness (physical suffering) could cause depression (psychological suffering).

Suffering can occur at several levels; at an intrapersonal level, the person experiences feelings such as hopelessness, self-criticism, failure or loss (Ferrel & Coyle, 2008; Ladner, 2004). Interrelational suffering can happen due to excessive dependence on others, interpersonal conflict and the inability to maintain healthy boundaries between the self and other individuals (Ferrel & Coyle, 2008). Contextual suffering occurs due to a conflict between a person and his/her environment or community and a separation from a familiar comforting environment (Ferrel & Coyle, 2008).

As discussed previously, Neff (2003) identified three components of self-compassion; whereas Reyes (2011) has added wisdom as an attribute of self-compassion. Wisdom is the ability to view suffering in a more positive light and take steps to alleviate suffering without criticizing oneself. It involves identifying and modifying harmful behaviors or thoughts to reduce distress (Florida, 2002; Yao, 2008). Self-compassion is activated by a triggering event, this event can motivate an individual to identify the source of suffering and take proactive steps to enhance well-being. For example, a visit to the emergency room after a stroke could

motivate a smoker to take steps to abstain from smoking, or a panic attack could motivate an individual to seek psychotherapy. Such an event could help a person realize that he/she has the choice to alleviate his/her suffering and improve his/her circumstances (Reyes, 2012). As a result of self-compassion, the person engages in self-care, experiences a greater level of independence, experiences a greater capacity to empathize with other individuals, and develops healthy interpersonal relationships (Reyes, 2012).

Gilbert and Irons (2004) provided a neuropsychological explanation for the relationship between the neurological systems and self-compassion and the resulting effect on emotions and wellbeing. The Social Mentality Theory combines evolutionary biology, neurobiology and attachment theory (Gilbert, 1989). According to this theory, self-compassion reduces activation in the limbic system thereby 'deactivating' the 'threat system', which reduces feelings of intimidation and insecurity (Gilbert, 1989). On the other hand, self-compassion activates the 'self-soothing' system by activating the Oxytocin Opiate system, thereby enhancing feelings of safety and secure attachments (Gilbert and Irons, 2004).

Some researchers conceptualize self-compassion as trait, which contributes to individual differences. Accordingly, self-compassion can be taught; Neff (2003a) found that individuals practicing Buddhism who had been trained to practice self-compassion and meditation scored higher on the Self-Compassion Scale than a comparison group of college undergraduates. Engaging in Buddhist meditation was also correlated positively to mental health and wellbeing (Neff, 2003a). In a study by Adams and Leary (2007), developing self-compassion in restricting eaters helped to reduce unpleasant negative reactions and guilt after eating and prevented the individual from uncontrolled eating after breaking a diet. Self-compassion was temporarily induced among participants by guiding them to think about

important negative life events using the components of self-compassion, for example, thinking about ones failure while maintaining emotional composure and accepting one's flaws as a part of the human condition (Leary, Tate, Allen, Adams & Hancock, 2007). A self-compassionate mindset was correlated negatively with negative affect and the participants were more likely to take responsibility for that event (Leary, et al., 2007).

Overall, self-compassion has been found to have a strong influence on general well-being, the severity of the symptoms of psychopathology and quality of life (Van Dam, Sheppard, Forsyth & Earleywine, 2010), emotional resilience (Neff, 2011) and positive mental states (Germer, 2009). The symptoms of social anxiety and depression are associated to excessive self-disparagement, self-control and setting unrealistically high standards for performance (Germer, 2009; Gilbert, 2009). Currently, few research studies focus on the relationship between self-compassion and the symptoms of depression or social anxiety. The next section will review existing literature on how self-compassion can affect the development of certain mental health disorders.

Self-Compassion & Symptoms of Psychopathology: Social anxiety is associated with harsh self-criticism, autonomic arousal and the fear of being evaluated by others, self-compassion was found to be lower among individuals diagnosed with social anxiety (Werner, et al., 2012). Individuals with higher levels of self-compassion seem to be able to deal with negative anxiety provoking events (Leary et al., 2007). Individuals with social anxiety are less forgiving of themselves, more self-critical, more lonely and had a greater tendency to engage in rumination rather than being mindful of the present compared to individuals who do not experience social anxiety (Werner, et al., 2012). The tendency to ruminate and engage in self-criticism enhances the impact of negative events by causing overpowering negative affect

(Werner, et al., 2012). Developing self-compassion among such individuals could help counteract the effects of a negative cognitive bias and help them view social situations in a more positive light thereby reducing harsh self judgments (Werner et al., 2012).

Van Dam and colleagues (2011) compared self-compassion to mindfulness and their ability to predict 'symptom severity' and 'quality of life' among individuals with symptoms of anxiety and depression. Self-compassion was found to be a stronger predictor of the intensity of symptoms and the quality of life than the characteristic of mindfulness. Raes (2011) studied the role of self-compassion in the development of depressive symptoms among a non-clinical sample of college students. The Self-Compassion Scale was administered twice to a group of 347 students, five months apart. The individuals with higher levels of self-compassion showed a reduction or an insignificant increase in the scores on a depression scale from the baseline scores due to the ability to protect oneself from being overwhelmed by the negative affect caused by a stressful life event (Raes, 2011). Another study found that rumination potentially mediates the relationship between self-compassion and depression in a sample of 271 undergraduate students (Raes, 2010).

Leary and colleagues (2007) conducted five studies using hypothetical and real-life situations and found that self-compassion helps individuals manage their negative affective states and helps them cope with the situations. Though the study found that individuals with higher scores in self-compassion took more responsibility for the event, they were less likely to engage in rumination or experience overwhelming negative emotions than individuals with lower scores on self-compassion. Thus self-compassion was found to be a safeguard, as it helps individuals to treat themselves with kindness and not be too harsh on themselves in response to suffering or failure. It also helped individuals to perceive negative events in a more realistic

manner without being too self-critical or being too self-protective or defensive about one's role in causing the unpleasant event.

Depression has been associated with cognitive-personality vulnerability styles, which consist of sociotropy which is characterized by excessive reliance on others, the need to seek other's approval, and a fear of being deserted by others (Beck, 1983). Persons high in sociotropy tend to cope with negative events through self-blame and isolating themselves. Autonomous individuals are self-dependent and maintain high standards for achievement, due to their self-critical nature they engage in rumination and experience extreme inadequacy (Nietzel &Harris, 1990). Self-critical individuals are harsh towards themselves both at an individual level and in social situations (Wong & Mak, 2012).

Wong and Mak (2012) studied how self-compassion moderates the relationship between cognitive-personality vulnerability variables of sociotropy, autonomy and self-criticism and depression among 345 Chinese adults. Each of the components of self-compassion played a unique moderating role between depression and the three factors: sociotropy, autonomy and self-criticism. Self-kindness was found to moderate the relationship between autonomy and self-criticism and depression (Wong & Mak, 2012). Being kind to oneself reduced one's tendency to judge himself negatively or harshly thus weakening the association between autonomy, self-criticism and depression.

Mindfulness can help an individual to be aware of his/her abilities and set goals accordingly. Mindfulness was found to weaken the relationship between autonomy and self-criticism with depression (Wong & Mak, 2012). Being able to acknowledge that all individuals are equally vulnerable to experience suffering weakened the relationship between self-criticism

and depression. Mindfulness was actually found to worsen sociotropy, as it increases their awareness towards their constant need for dependence.

Though several studies have identified a negative correlation between the elements of self-compassion and scores on scales measuring the symptoms of anxiety and depression (Leary et al., 2007; Neff, 2003a; Neff, Rude and Kirkpatrick, 2007), very little research actually attempts to identify the factors, which essentially mediate the relationship between self-compassion and psychopathology (Raes, 2010). Depressive rumination, which consists of continually thinking of one's depressed mood, was a strong predictor of the intensity of depressive symptoms is negatively correlated to self-compassion (Neff 2003a). It was found to be mediating the relationship between self-compassion and depression. Individuals who score higher in self-compassion were less likely to experience symptoms of anxiety or depression following a traumatic event as they were less likely to ruminate on their negative affect (Leary et al., 2007). Ying (2009) and Mills and colleagues (2007) identified that the positive components of self-compassion (Mindfulness, Self-kindness and Common Humanity) were negatively correlated with depressive symptoms. Over-identification was found to be a significant predictor of depressive symptom among a sample of students pursuing a degree in social work; this result shows that the existence of mindfulness is a precondition required for the development of common humanity and self-kindness (Ying, 2009). Depressive symptoms were negatively correlated with the positive symptoms of self-compassion this relationship was partially mediated by low levels of an ability to understand the meaning or significance of life (Ying, 2009) and rumination (Raes, 2010). Ying (2009) conducted the study in a sample of students pursuing a Master's degree in Social Work and Mills and colleagues (2007) used a

sample of undergraduate students. The relationship between the symptoms of depression and self-compassion hasn't been studied among clinically depressed individuals.

Raes (2010) found that worry was a more significant mediator in the relationship between anxiety and self-compassion as compared to brooding. A person who engages in worrying repetitively thinks about traumatic events that might occur in the future (Watkins, 2008). Williams et al, (2008) found that college students who reported high levels of self-compassion were less likely to engage in academic motivation anxiety and procrastination. Procrastination has been found to be associated to 'task-anxiety, fear of failure and lower grades' (Elliot et al., 2001). Self-compassion helps to mitigate a person's lack of confidence in his/her ability to perform academically which reduces his/her motivation to procrastinate (Williams et al., 2008). Leary and colleagues (2007) found that individuals who scored higher in self-compassion were less likely to engage in catastrophizing in response to supposed negative scenarios. Catastrophizing about a possible or imagined future event is a feature of anxiety or worry (Vasey & Borkovec, 1992).

Thompson and Waltz (2008) studied the relationship between self-compassion and the symptoms of Post Traumatic Stress which include the conscious evading of trauma related stimuli, emotional numbing and hyperarousal in a sample of 210 students out of which 100 reported that they had experienced past trauma. Results showed a relationship between experiential avoidance involves avoiding any emotional or behavioral aspects relevant to the trauma. A negative relationship was identified between posttraumatic stress and avoidance and self-compassion. Self compassionate individuals are more likely to be open to experiencing trauma related stimuli as they are less self-critical in response to those stimuli which helps them process the emotions rather than avoiding it (Thompson & Waltz, 2008). However, no

significant relationship was found to exist between re-experiencing the trauma and autonomic hyperarousal and self-compassion.

Self-compassion was found to be an important factor in reducing depression and alcohol among individuals with alcohol dependence. Baseline measures were obtained for the symptoms of anxiety and depression and self-compassion among a sample of 77 who were to undergo treatment for drug or alcohol dependence. Post-baseline levels were taken after 15 weeks. The study found that individuals with substance dependence scored higher in levels of subjective isolation, over-identification and self-criticism as compared to the general population (Brooks & Kay-Lambkin, 2012). Results show that a diminution in alcohol intake and a reduction in anxiety and depressive symptoms were accompanied by an increase in the levels of self-compassion on all scales. Self-compassion was found to motivate the person to avoid using alcohol to cope with the symptoms (Neff, 2003a).

Terry and Leary (2011) suggested a relationship between self-compassion and physical and psychological wellbeing. Forty percent of physical conditions such as heart disease, obesity and diabetes (Levesque et al., 2007) can be controlled through health promoting habits, such as exercise and a balanced diet. 'Self-regulation' is an individual's ability to set and achieve goals, it is a crucial factor required to engage in practices, which promote wellness (Terry & Leary, 2011). Self-compassion was found to be a major factor in being able to set, attain and modify health oriented goals. It was also associated to treatment adherence, help seeking in response to physical illness and a reduction in unpleasant emotions (Terry & Leary 2011). In another study, 187 individuals diagnosed with HIV were asked questions related emotional and behavioral impact of being HIV positive (Brion, Leary & Drabkin, 2013). The level of self-compassion was negatively correlated to stress, self-pity and shame in response to

a life threatening illness. It also promoted the individual's ability to reveal his/her HIV status to others and seeking and continuing appropriate treatment. Thus self-compassion encourages a person to identify that they physically or psychologically distressed and take the appropriate steps to seek help (Terry, et al., 2011).

Coping

Folkman and Moskowitz (2004) defined coping as cognitions and behaviors that help a person deal with challenges and demands brought about by a situation that is judged as stressful. A situation is considered to be stressful when an individual's progress towards an important goal is thwarted and when the individual does not possess adequate resources to deal with the situation. Coping helps individuals to adapt to a stressful situation by helping them deal with negative emotional responses, think productively, engage in constructive behaviors, control physiological arousal and regulate one's social environment to reduce the deleterious effects of distress (Compass, Connor-Smith, Saltzman, Thomsen & Wadsworth, 2001). The transactional model of coping and stress suggests that the process of coping has three phases consisting of primary appraisal, which involves an initial assessment of the stressful nature of the situation. It is followed by secondary appraisal, which consists of evaluating of our own resources to cope with the situation. Secondary appraisal is followed by the actual effort to implement coping strategies to reduce the stress caused by the situation (Lazarus & Folkman, 1984). The process of coping is dynamic and complex, which helps us to address the ever changing cognitive and behavioral demands of a distressing situation. Lazarus (1966) suggested that coping is a non-linear process wherein the phases of coping can occur in any sequence; for example, if the individual realizes that she/he has

abundant resources to cope, she/he will appraise the situation as less stressful. In contrast, when the situation is perceived as uncontrollable and the person does not possess adequate resources, then the situation is judged as highly stressful. The ultimate goal of coping is to identify and modify the source of stress and deal effectively with the resulting emotional response (Lazarus, 1993).

The cognitive-phenomenological model of stress suggests that psychological distress depends upon the stressful event, our assessment of the event, which in turn elicits a coping response. The process of assessing the stressful situation involves giving meaning to the situation and then identifying a coping strategy to respond to the situation (Lazarus & Folkman, 1984). The assessment of the stressful situation and the coping strategy employed depend upon the nature of the situation (Rabkin & Struening, 1976) and subjective characteristics of the individual (Wrubel, Benner & Lazarus, 1981). Coping strategies can help mitigate the stress and allow the person to identify solutions to difficulties causing stress (Parker & Endler, 1996). The nature of the coping depends on the degree to which the person views the problematic situation as controllable (Baum, Fleming & Singer, 1983). Personality characteristics such as optimism, extraversion, openness and conscientiousness have been associated to adaptive coping and neuroticism to maladaptive coping (Carver & Connor-Smith, 2010).

Types of Coping

In the literature on coping, the COPE (Caver, Scheier & Weintraub, 1989) has become the standard questionnaire for assessing self-reported coping strategies (Cook & Heppner, 1997). The items in the COPE measure coping as a disposition and identify the extent to which

the person uses a particular strategy in a stressful situation (Carver, Scheier & Weintraub, 1989). These two categories are then broken down further into 15 subscales: (1) positive reinterpretation and growth, (2) mental disengagement, (3) focus on venting of emotions, (4) use of instrumental social support, (5) active coping, (6) denial, (7) religious coping, (8) humor, (9) behavioral disengagement, (10) restraint, (11) use of emotional social support, (12) substance use, (13) acceptance, (14) suppression of competing activities and (15) planning. Coping Strategies cannot be rigidly categorized as adaptive or maladaptive, as the same coping strategy may be helpful to one individual but not to another (Wortman &Lehman, 1985). The undue reliance on an adaptive coping strategy might reduce its functionality; the person may also fail to use other available strategies. For example, seeking excessive social support to deal with a situation might make a person rely less on personal resources. The following section will present a brief overview of the different types of coping strategies that have been identified by research on coping.

Problem-focused versus and emotion-focused coping. Problem-focused coping occurs when an individual targets the source of the problem by seeking information, identifying the pros and cons of the solution, and either eliminating it completely or reducing its negative consequences (Lazarus and Folkman, 1985). For example, when a person is facing bankruptcy he may begin saving money and searching for a better job to ameliorate his situation. Thus problem-focused coping involves identifying a goal and then developing a plan to reach the goal effectively (Folkman and Moskowitz, 2004). Using the problem solving strategy in response to an uncontrollable or unavoidable situation could be maladaptive. For example,

certain difficulties may arise due the natural process of aging; using problem-focused coping would be practically useless (Allen & Leary, 2010).

Emotion-focused coping involves targeting the negative emotional response to the problematic situation (Folkman and Moskowitz, 2004). Emotion-focused strategies could involve: comforting oneself through relaxation; looking for emotional support from others; venting through displays of emotion such as crying; through drug and alcohol abuse; by avoiding the stressful situation completely or by ruminating on the symptoms of distress rather than resolving it (Carver & Connor-Smith, 2010). For example, a person who is experiencing social anxiety might either avoid social situations to reduce anxiety or might use relaxation techniques to reduce anxious responses to such situations. 'Focusing on and venting of emotion' is an emotion-focused strategy which has found to be a useful strategy to deal with bereavement and mourning loss however focusing exclusively on the negative emotion is maladaptive in nature as the person does not make an attempt to mitigate this unpleasant emotion (Scheier & Carver, 1977). Though emotion-focused strategies are considered to be maladaptive, they have been found to be adaptive in helping individuals to be aware of and process their emotions (Traue & Pennebaker, 1993). It is also useful in response to uncontrollable situations, as the person focuses on dealing with the negative repercussions of a situation that cannot be reversed (Neff, et al., 2005).

There is often no clear distinction between these two types. Problem and emotion-focused coping can also be viewed as being complementary. By resolving the problem there is also a reduction in the intensity of the negative emotion caused by the problem. Effective emotion-focused coping helps the individual manage negative emotions thereby making it

easier to engage in effective problem solving (Lazarus, 2007). However, differences between the two styles of coping have also been identified problem-focused coping is used mainly when the person finds it possible to identify a concrete plan of action to target the stressful situation and resolve the problem. Emotion-focused coping on the other hand is used when the problem is judged as being unsolvable and reducing or managing unpleasant emotions helps provide some respite from the stress (Folkman & Lazarus, 1985).

Avoidance oriented coping. Engagement coping involves reducing or eliminating the stressor and its resulting negative emotions; whereas disengagement coping involves evading or avoiding the stressor and its effects completely (e.g., wishful thinking and fantasizing; Carver & Connor-Smith, 2001). Carver and colleagues (1989) also identified two dysfunctional avoidance oriented strategies: behavioral disengagement and mental disengagement. Research has found a strong positive correlation between depressive symptoms and the use of behavioral disengagement coping (Burker, Evon, Loiselle, Finkel & Mill, 2005). Behavioral disengagement occurs when a person ceases his goal seeking behavior and fails to achieve the goal as the stressful situation is interfering with goal attainment. When a person predicts that the coping process will yield unfavorable results, then she/he is more likely to engage in behavioral disengagement (Carver et al., 1989).

Mental disengagement occurs when a person diverts his attention away from the stress caused by the problematic situation and invests his mental resources in activities such as daydreaming, sleeping or spending excessive time watching television (Carver et al., 1989). Though the conscious effort to avoid thinking about the problem could reduce stress it does not help the person resolve the problem itself (Aldwin & Revenson, 1987). Denial coping

occurs when an individual rejects the reality or the presence of a problem; 'Using denial as a coping strategy' has both positive and negative implications. Denying the presence of a problem might actually give the person some respite from stress, which could encourage adaptive coping (Cohen & Lazarus, 1973). However, denial has been associated with poorer outcomes for individuals experiencing mental illnesses as the very refusal to accept the presence of an illness prevents them from seeking treatment (Adelbot & Weisman de Mamani, 2009). Meyer (2001) also found higher rates of relapse and symptom aggravation among individuals who use denial coping a diagnosed with schizophrenia. Partial denial may occur when the person accepts the presence of certain symptoms for example severe weight loss but denies the presence of a disorder for example an eating disorder (Adelbot & Weisman de Mamani, 2009). Denial requires an initial cognitive understanding of the illness, which the individual denies later in an attempt to cope with stress; this requires a strenuous effort to repression of cognitions related to the illness (Bach & Hayes, 2002).

The coping method of cognitive-distraction can also be classified as avoidant coping, wherein the individual redirects his efforts onto another area to distract himself from the stressor (Compass et al., 1999). Disengaging oneself from the stressor is effective in the short-run as it distances the individual from the problem temporarily; however, it does not resolve the problem, which will resurface eventually. Avoiding the stressor could also lead to repetitive intrusive thoughts and drug or alcohol abuse or gambling (Najmi & Wegner, 2008).

Acceptance Coping. Acceptance coping occurs when the individual accepts the presence of a problem situation and makes the commitment to deal with the stress effectively. Research has shown that denial and acceptance might occur simultaneously; for example, a

person might accept the presence of a disorder but may deny the presence of certain symptoms like hallucinations or delusions (Adelbot & Weisman de Mamani, 2009). Some research has shown that acceptance coping among some persons diagnosed with a disorder can increase the risk of developing depression (Lewis, 2004). Such individuals require resources (e.g., counseling) to help cope with the illness (Lewis, 2004).

Positive reappraisal and growth. Positive reappraisal and growth is essentially an emotion-focused coping strategy in which the person construes the situation differently by giving it a more positive meaning. This reduces the negative emotions brought about by the situation making it easier to invest our coping resources in problem-focused coping (Carver et al., 1989).

Religious Coping. Turning to religion has been found to a commonly utilized coping strategy (McCrae & Costa, 1986). Turning to religion encompasses several other coping strategies such as positive reinterpretation and growth. Religious beliefs can also be used as a means to seek emotional support and may help us gather resources for active coping (Carver et al., 1989). Research has shown that religion can influence physical and mental health (Seybold & Hill, 2001). Religious beliefs have been shown to have physical benefits such as a lower rate of heart disease and improved kidney functioning (Levin & Vanderpool, 1992). However religious beliefs that are disjointed, rigid, or inconsistent have harmful effects on health. Such beliefs have been associated with child abuse, neglect (Paloutzian & Kirkpatrick, 1995), and delusional beliefs wherein the person believes her/himself to be in contact with God or depends exclusively on divine intervention as a means to resolve problems (Pargament, 1997). Positive associations have also been found between religion and psychological wellbeing (Gartner,

1996). Religious coping is used to address the immediate distress or negative emotional outcomes of a stressor. Religious beliefs can potentially help an individual to gain the mental strength to resolve the problem or reappraise the situation to attribute a positive meaning to an unchangeable situation (Folkman & Moskowitz, 2004).

Meaning-focused coping. Meaning-focused coping occurs when an individual modifies the meaning of the stressful situation by using cognitive strategies. Such a strategy is useful in a situation when there is no concrete solution to the problem which is causing chronic stress and when the situation is out of the person's voluntary control (Park & Folkman, 1997). By infusing a novel or positive meaning into the stressful situation, the person can transform negative emotions into positive emotions. Thus meaning focused coping involves a reappraisal of a stressful situation by viewing it in a more positive light (Folkman, 2008)

Proactive coping. Aspinwall and Taylor (1997) suggested that people have the ability to sense and envisage a potential stressful situation in advance and make the effort to reduce its impact. Proactive coping is different from anticipatory coping. Anticipatory coping is when a person prepares himself in advance to cope with the effects of an impending or imminent stressful situation (Folkman and Lazarus, 1985). Proactive coping occurs before accommodative coping, as it involves the process of gathering information and developing skills and resources, however this preparation is for stressors in general and is not aimed at a particular situation or a definite problem (Aspinwall & Taylor, 1997).

Social Coping. Coping strategies such as emotion focused, problem-focused coping depend solely on the individual's ability to appraise the situation, problem or emotion and deal with the stressor effectively. Berg, Meegan and Deviney (1998) proposed the Social-

Contextual Model of coping; they suggested that coping could be conceptualized as a more process in which an individual engages in coping with other individuals in a social manner. Thus coping is collaborative, an individual may face the stressor, but others get involved with the individual in the process of coping. For example when a member of a family faces cognitive decline, the other members recompense and help the individual to cope with the deficit. Gottlieb and Wagner (1991) called this process an "interdependent coping effort" by the members of a social system.

Hobfoll and colleagues (1994) developed the Dual-Axis Model of Coping, which suggests that coping is a communal process with two dimensions: active-passive and prosocial-antisocial. When an individual actively targets the root cause of the stressor and attempts to deal with it, then she/he is engaging in active coping; the opposite of such a strategy is passive or avoidant coping, in which an individual avoids dealing with the stressor in a direct fashion. Pro-social coping involves using one's social support to cope. Antisocial coping involves alleviating one's own problems at the expense of others or by causing harm to others. Pro-social coping strengthens social bonds whereas antisocial coping weakens the individual's social relationships and reduces the likelihood of the person receiving social resources in the future. An active-prosocial coping strategy is the most adaptive coping strategy as it combines problem-focused coping with communal elements (Dunahoo et al., 1998).

Coping and emotions

The main aim of coping is to reduce the intensity of the negative emotions elicited by the stressful situation. The coping strategy used can be considered as being successful if positive emotions are brought about after the stressful situation have been resolved (Folkman

and Moskowitz, 2004). However, research has shown that positive emotions also play a role in the process of coping rather than solely being the outcome of successful problem solving. During a stressful period, the individual is still capable of experiencing positive emotions brought about by positive events (Folkman and Moskowitz, 2000). Negative and positive affect are complementary help an individual to adapt. Negative emotions caused by a stressful event motivate the individual to resolve the problem at hand positive emotions helps the person to consolidate his coping resources by providing the individual with a respite from a predominantly negative affect. Positive affect also plays a protective role by reducing the injurious psychological effects of negative affect and stress (Lazarus, Kanner & Folkman, 1980). According to the 'Broaden and Build' model positive affect broadens our attention and cognitive abilities and helps us build bodily, mental and social resources (Fredrickson, 1998).

Coping styles such as positive appraisal and problem-focused coping involve the simultaneous development of positive affect while coping with the stressful situation (Folkman and Moskowitz, 2000). Positive-reappraisal involves the process of attributing a more optimistic meaning to the stressful situation thereby reducing distress; for example, a caregiver might view the act of care giving as an opportunity to develop a closer relationship with the family member. Problem-focused coping involves systematic planning and goal attainment, which help improve focus and a sense of control (Folkman and Moskowitz, 2000).

Coping and Psychopathology

The relationship between coping strategies and psychopathology is complex (Aldwin & Revenson, 1987). Coping measures usually identify the type of coping strategy used rather the than the person's ability to actually execute the strategy satisfactorily (Clark & Hovanitz,

1989). The quantity and the kind of coping strategies used depend upon the individual's capability, which is how he appraises the situation to ascertain how to use a particular strategy and on the implementation, which is how, the person actually executes the chosen coping strategy (Clark & Hovanitz, 1989). The relationship between specific stressful situations and coping strategies is difficult to determine as the individual's appraisal of the situation and the subjective coping resources available (Lazarus & Folkman, 1984). Clark & Hovanitz (1989) administered the Ways of Coping Checklist and the MMPI to a sample of 90 female college students. They found that the implementation of coping strategies accounted for a greater variance in the measures of psychopathology than the ability to select a coping strategy based on the nature of the situation.

To establish a direction of the relationship between coping strategies and psychopathology it is necessary to conduct a longitudinal study; however, most studies are cross-sectional in nature. Coping could predict well being irrespective of the presence or absence of mental health symptoms. Also, individuals with psychological symptoms are more likely to use maladaptive coping strategies; for example, persons with symptoms of depression are more likely to use ruminative coping, and thus, it is difficult to establish a cause-effect relationship between coping and psychopathology (Aldwin & Revenson, 1987).

Two models have been proposed to study the relationship between coping and psychopathology. The Additive Effects Model (Aldwin & Revenson, 1987) suggests that, irrespective of the level of stress caused by an event, coping has an undeviating and advantageous effect on an individual's health. These authors also developed a competing model – the Interaction Effects Model –, which suggests that, the type and the intensity of the stressful event moderates the effectiveness of the coping strategy used. Studies have produced

mixed results. A study by Pearlin and colleagues (1981) found problem-focused coping interacted with the nature of the stressful event to moderate the effects of depression. On the other hand, Martin and Lefcourt (1983) found that humor, as a coping strategy was helpful in reducing the negative repercussions of a stressful event.

Aldwin and Revenson (1987) suggested a difference between coping effectiveness and coping efficacy. Coping effectiveness is the the frequency of using a coping strategy correlated with the outcome measure, such as physical or psychological health. Coping efficacy considers the individual's perception of whether or not the coping strategy used was actually beneficial in reducing the stressful nature of an event. Aldwin & Revenson (1987) used a sample of individuals whose psychological health records were available. They found a bidirectional relationship between coping and symptoms of psychopathology; maladaptive coping strategies were more likely to be used in response to stressful situations by individuals with poorer mental health, irrespective of the intensity of their symptoms or the level of stress. Emotion-focused coping strategies, consisting of escapism and self-blame, were found to have additive or main effects. Using these strategies directly intensified emotional distress. Problem-focused strategies seemed to have an interaction effect on distress.

A person engages in avoidance coping when she/he uses cognitive or behavioral techniques to disregard or evade dealing with the stress caused by a specific situation (Holahan, Holahan, Moos, Brennan, & Schutte, 2005). Avoidance coping has been found to have greater maladaptive repercussions than problem-focused and emotion-focused coping strategies. Holahan and colleagues (2005) conducted a study, which examined the negative impact of avoidance coping on mental health over a span of ten years. The researchers controlled for the presence of depressive symptoms at the beginning of the study; as a result a

rise in stressful experiences and depression could be attributed to avoidance coping. They found that those participants who engaged in excessive avoidance coping were more likely to experience persistent and heightened stressful events after four years and depressive symptoms after ten years (Holahan et al., 2005). Avoidance coping helps to reduce the stress momentarily; however, it does not eliminate the stress, which makes them vulnerable to developing depressive symptoms (Holahan, et al., 2005). Likewise, Billings and Moos (1984) found that avoidance coping was linked to more severe symptoms of unipolar depression in a sample of 424 men and women.

Blalock and Joiner (2000) conducted a confirmatory factor analysis and found that avoidance coping has two sub-categories of behavioral and cognitive avoidance. Cognitive avoidance coping involves minimizing the stressful nature of the situation by accepting that the situation cannot be changed. Behavioral avoidance involves engaging in impulsive behaviors such as binge eating to reduce stress (Blalock & Joiner, 2000). They found that cognitive avoidance that is a more passive coping strategy led to an increase in the symptoms of anxiety and depression especially among women. Among samples of college students, Penland and colleagues (2000) found that avoidance oriented coping strategies such as wishful thinking increased the severity of depressive symptoms. Crockett and colleagues (2007) studied a sample of 148 Mexican American college students avoidance coping was associated with higher levels of depressive and anxiety symptoms and lower adjustment as compared to students who used problem-focused coping. Individuals who experience panic attacks tend to use avoidance in response to anxiety provoking situations (Borden et al., 1988). Spira et al.,

(2002) found that avoidance oriented coping was associated with an increased bodily panic like symptoms and self-reported anxiety symptoms.

Problem-focused coping is more adaptive when compared to avoidance-oriented coping. Wijindaele et al., (2007) used a sample of 2616 adults. Problem-focused coping strategies like active coping were associated with lower levels of perceived distress and symptoms of anxiety and depression than individuals who used avoidance coping strategies like denial. Folkman (1997) found that problem-focused coping could help them experience a greater sense of control among a sample of men who were caring for terminally ill partners. Problem-focused coping encourages the individual to set small and achievable goals helping that reduces psychological distress. Sherbourne et al., (1995) found that there was a reduction in severe depressive symptoms when the participants used problem-focused coping as compared to avoidance coping. However, the results of the study are questionable due to a low response rate. Problem-focused coping can help reduce minute stressors before they grow rapidly into symptoms of depression and anxiety (Holahan, 2005). Problem-focused coping was also found to help individuals set mastery-oriented goals (Folkman, 1997). Chao (2011) found that avoidance coping increased the level of stress and reduced wellbeing and social support in a sample of college students. Problem-focused coping was found to protect the wellbeing of the students while they were experiencing a stressful situation (Chao, 2011).

Research on emotion-focused coping has been mixed, as it has been found to be both beneficial and maladaptive. Seeking social support has been found to lower symptoms of stress, depression and anxiety among (Wijindaele et al., 2007). Social support was also found to safeguard the impact of stress and maintain wellbeing and encourage problem-focused

coping in a sample of students (Chao, 2011). Emotion-focused strategies like venting and rumination, which focus on negative emotion rather than taking steps to reduce emotional distress, have been found to be maladaptive (Billings & Moos, 1984).

The symptoms of anxiety and depression have been found to be associated with directing problems towards oneself whereas externalizing behaviors such as aggression involve directing problems outward towards others (Achenbach, McConaughey & Howell, 1987). A study by Kreuger (1999) found that the symptoms of anxiety and depression are comorbid as they have a similar underlying internalizing factors consisting of anxiety, misery and fear (Krueger, 1999). Several research studies have identified that problem-focused coping is associated with lower displays of aggression and acting-out behavior and a greater capacity for anger control and responding to stress in a controlled and calm manner without any displays of aggression (Arslan, 2010; Whatley, Foreman & Richards, 1998). Emotion-focused coping has been found to be positively associated with aggression (Whatley, Foreman & Richards, 1998). There is a lack of research on the association between coping and the symptoms of internalizing disorders like anxiety and depression. The present study will add to the existing literature on the association between coping and the symptoms of anxiety and depression.

Coping and Self-Compassion

An individual's ability to use adaptive coping strategies to reduce the negative consequences of a stressful event predicts personal well being and health (Allen & Leary, 2010). However, the efficacy of a particular coping strategy is contingent on the presenting circumstances and individual differences and characteristic ways in which people respond to stressful situations (Lazarus & Folkman, 1991). The way a person perceives a stressful

situation can influence how the person copes with the negative repercussions of the situation. 'Positive Cognitive Restructuring' involves reframing the situation in a more positive light by attaching a more positive meaning to the circumstance (Allen & Leary, 2010). Individuals who score higher on self-compassion tend to use positive restructuring to view the situation in less calamitous terms and de-emphasize negative affect that arises as a result of the stressful situation (Neff, Hsieh & Dejritterat, 2005). In a study, Leary et al. (2007) asked participants to recall a recent negative event and rate its negative intensity, their cognitions and affect surrounding the event. Individuals who scored higher in self-compassion were less likely to deduce that the negative event was an indication of their personal shortcomings (Leary et al., 2007).

'Compassionate Mind Training' (CMT) is a group based therapeutic technique developed by Gilbert and Procter (2006). It uses cognitive restructuring to help individuals to identify their propensity to be self-critical and induce a self-compassionate mindset to be more forgiving of themselves in response to stressful situations. Studies have shown that CMT has lead to a reduction of depressive symptoms, harsh self-judgment, guilt and deferential behavior (Gilbert & Procter, 2006). Problem-focused coping strategy helps an individual to develop a systematic plan to resolve the problem at hand (Lazarus, DeLongis, Folkman & Gruen, 1985).

Neff et al. (2007) found that self-compassionate individuals were more likely to engage in 'action-oriented coping', which includes positivity, inquisitiveness, investigation and resourcefulness. Problem-focused coping has been associated with mastery-based goals. An individual who sets mastery-based goals aims for a thorough understanding or the mastery over the task or the material whereas performance based goals aim towards being successful at a

task to improve one's image in the society or one's self-esteem (Dweck, 1986). Neff et al. (2005) found that self-compassion was associated positively with mastery-based goals in a sample of 222 students. This relationship was mediated by a lower fear of failure and belief in one's subjective competence. Self-compassionate individuals were 'emotionally resilient' in response to failure which reduces its negative impact which in turn motivates the individual to set mastery-based academic goals (Neff et al., 2005).

Problem-focused coping strategy is useful only if the situation is controllable. Self-compassionate individuals are more likely to use problem solving if they judge the situation as being viable to being changed (Allen & Leary, 2010). Neff et al. (2005) studied the relationship between self-compassion and the coping styles measured by the COPE scale (Carver, Scheier & Weintraub, 1989) coping with academic failure. It was observed that self-compassion was positively associated with the emotion-focused strategies of positive reinterpretation and growth and acceptance. This relationship was expected as failure cannot be reversed, thus an emotion-focused strategy would be most adaptive in this situation (Neff et al., 2005). A negative association was found with focus or venting of emotions, avoidance focused strategies denial and mental disengagement (Neff, et al. 2005). Focusing on one's emotion is indicative of rumination, which is a maladaptive coping strategy (Nolen-Hoeksema & Morrow, 1991). The component of mindfulness in self-compassion prevents the individual from being overwhelmed by negative emotions, which reduces the tendency to ruminate (Neff, 2003a). Mindfulness also prevents individuals from denying or avoiding the situation by helping them identify and process the emotions thoroughly (Neff et al., 2005). The results for the relationship between self-compassion and problem-focused coping have been mixed. Neff et

al. (2005) found no relationship between problem-focused coping and self-compassion, as a specific irreversible situation was used to study the link between self-compassion and coping; problem-focused strategies would have been maladaptive in such a situation (Neff et al., 2005). In another study Neff et al. (2004) found that self-compassion and problem-focused coping were positively related if the association was studied without focusing on a specific uncontrollable situation.

Current Study and Hypothesis

This study examined the role of self-compassion as a mediating factor in the relationship between coping strategies and symptoms of psychopathology (i.e., social anxiety, worry, and depression). This study attempted to determine the types of coping strategies associated with self-compassion, which in turn may buffer against anxiety and depression symptoms. Hence, it was hypothesized that self-compassion would have a strong association with both coping strategies and with the symptoms of psychopathology and would mediate the association between coping strategies and psychopathology. For example, individuals who use maladaptive coping strategies could be at a risk of developing symptoms of psychopathology if they possess low levels of self-compassion. Three different models were examined in this study, each focusing on a specific group of symptoms (social anxiety worry and depression). To date no published studies to our knowledge have examined the role of self-compassion as a mediator between coping strategies and psychopathology.

This study has several advantages. First, the study adds to the existing literature on the role of self-compassion as a potential protective factor and will help to explain the relationship between self-compassion and psychological symptoms. Second, a sample of undergraduate

students was used in the study rather than a clinical sample; self-compassion is under-studied in college students, and it is largely unknown how it functions in this population. This method also allows for the study of self-compassion in a non-clinical population, which is important given that self-compassion is conceptualized as a dimensional personality factor (Neff, Rude & Kirkpatrick, 2007). Third, a dimensional rather than a categorical view of psychopathology was used in this study. Fourth, three contrasting models tested whether self-compassion varies across symptom outcomes (social anxiety, worry and depression).

Hypothesis 1 examined self-compassion as a mediator between coping strategies and depression symptoms (See Figure 2). 1a: A positive association was expected between emotion-focused coping and the symptoms of depression. 1b: A positive association was expected between emotion-focused coping and self-compassion; however a negative relationship was expected between self-compassion and focus on venting emotions. 1c: A negative association was expected between self-compassion and depressive symptoms. 1d: self-compassion was hypothesized to mediate the relationship between coping and depression.

Hypothesis 2 examined self-compassion as a mediator between coping strategies and symptoms of social anxiety (See Figure 3). 2a: A positive correlation was expected between avoidance oriented coping and the symptoms of social anxiety. 2b: A negative relationship was expected between self-compassion and avoidance-oriented coping. 2c: A negative relationship was expected to be found between self-compassion and the symptoms of social anxiety. 2d: self-compassion was hypothesized to mediate the relationship between coping and social anxiety.

Hypothesis 3 examined self-compassion as a mediator between coping strategies and worry (See Figure 4). 3a: Problem-focused coping was expected to be correlated negatively

with worry. 3b: Self-compassion would be correlated positively with problem-focused coping. 3c: A negative correlation was predicted between self-compassion and worry. 3d: self-compassion was hypothesized to mediate the relationship between coping and worry

Method

Participants and Procedure

A total of 175 participants were recruited using the Psychology Subject Pool at Eastern Illinois University. To make the sample more heterogeneous, only data from participants ages 18 to 24 years were used; excluding 5 participants. Data from 28 participants had to be excluded from the study due to missing data (n = 23); leaving a final sample of 147. An a priori power analysis was conducted, indicating that approximately 100 participants were needed to detect a moderate effect size, so this sample size is adequate to test the hypotheses.

The sample consisted of 101 females (68.7%) and 46 males (31.3 %) enrolled either in the introductory psychology or research methods class and received course credit for participating in this study. Participants consisted of 93 Caucasian (63.3%), 35 Black or African American (23.8%), 9 Hispanic or Latino (6.1%), 3 Asian (2.0%), 5 Biracial or Multiracial (3.4%) and 2 participants (1.3%) belonging to other racial backgrounds.

Measures

Demographics: A demographics form was administered (See Appendix) to assess age, sex, educational level and so forth.

Self-Compassion Scale. The Self- Compassion Scale (Neff, 2003a) is 26-item scale that measures responses toward pain and failure. Participants respond to items using a 5 point

Likert scale ranging from "Almost Never" (1) to "Almost Always" (5). –The Self-Compassion Scale consists of 6 subscales: Self-Kindness, Self Judgment, Common Humanity, Isolation, Mindfulness and Over identification. The Self-Kindness scale contains 5 items. It measures a person's ability to be compassionate and forgiving towards ones shortcomings (e.g., "When I'm going through a very hard time, I give myself the caring and tenderness I need"). The Self- Judgment scale has 5 items. It measures a person's tendency to be harsh and critical towards oneself (e.g., "I'm disapproving and judgmental about my own flaws and inadequacies"). The Common Humanity subscale contains 4 items which measure a person's ability to recognize that all humans are vulnerable to suffering (e.g., "When things are going badly for me, I see the difficulties as part of life that everyone goes through"). The Isolation subscale also has 4 items, which measure an individual's tendency to feel secluded from others while experiencing difficulties (e.g., "When I think about my inadequacies, it tends to make me feel more separate and cut"). The Mindfulness scale measures an individual's ability fully experience and focus on the present; it contains 4 items (e.g., "When something upsets me I try to keep my emotions in balance"). The Over Identification scale has 4 items that measure a person's tendency to focus excessively on emotions and get overwhelmed by them (e.g., "When I'm feeling down I tend to obsess and fixate on everything that's wrong").

Scores on the negative items are reverse scored and the scores on all the subscales are averaged and totaled. Higher scores reflect greater levels of self-compassion. The internal consistency (α) estimates for the six subscales has been found to range from .77 to .81 (Neff, 2003a). For the 26-item scale, α was .92 (Neff, 2003a). For the entire scale, the three-week test-retest reliability coefficient was .93. For the 6 subscales, reliability ranged from .80 to .88

(Neff, 2003a). With regard to convergent validity, the self-compassion scale was correlated positively with social connectedness (r = .41) and correlated negatively with self criticism (r = -.65). Significant relationships were obtained between other concepts like emotional intelligence and its subscales (Neff, 2003a).

Social Phobia Scale (SPS)/Social Interaction Anxiety Scale (SIAS). The SPS/SIAS (Mattick & Clark, 1998) is a pair of scales, which contain 20 items each. Although two separate scales, they were developed to be given together as a 40-item scale with two subscales that assesses the fear of being scrutinized during routine activities and one's typical cognitive, affective, and behavioral reactions to situations involving social interaction. The Social Interaction Anxiety Scale measures anxiety or distress brought about while engaging in social interactions. The SIAS contains 20 items; responses are recorded using a 4-point Likert scale, 0 ("not at all true of me") to 4 ("true of me"). The items are comprised of self-statements describing one's response to social exchanges (e.g., "I find it easy to think of things to talk about"). Scores on the SIAS can be obtained by adding the scores on individual items. Scores range from 0 to 80, with higher scores indicative of greater levels of social anxiety. The Social Phobia Scale measures anxiety or distress caused by the fear of being scrutinized in social situations. It has 20 items and utilizes a scale ranging from 0 ("not at all") to 4 ("extremely"). Items on the SPS are all worded negatively (e.g., Being criticized scares me a lot). Scores range from 0 to 80, with higher scores reflecting more intense social anxiety.

Both SIAS and SPS have been found to possess strong psychometric properties. Mattick and Clarke (1989) found that Cronbach's alphas for the SIAS range from .88 to .93

and for the SPS from .89 to .94. Test-retest reliability coefficients recorded at 1 and 3 months were found to be greater than .90.

Center for Epidemiologic Studies Depression Scale (CES-D). This scale consists of 20 items that assess the level of depressive symptoms (Radloff, 1977). The scale contains 4 subscales which measure symptoms such as: depressed affect (blues, depressed, lonely, crying spells and sad), positive affect (just as good as others, hopeful about the future, happy and enjoying life), vegetative symptoms or somatic symptoms (bothered by things, concentration problems, everything is an effort, sleep problems and difficulty getting going) and interpersonal distress (people are unfriendly and people dislike me). The scale requires respondents to indicate the frequency of depressive symptoms in the past week. Responses range from 0 ("rarely") to 3 ("all the time"). The scale demonstrates sound psychometric properties. The CES-D scale has a Cronbach's alpha of .85-.90 (Radloff, 1977). Test-retest reliability estimates ranging from .47 to .70 have been obtained (Radloffm 1977). Discriminant validity for the CES-D was found to be .58 with a measure of self-esteem, .71 with trait anxiety and .44 with state anxiety (Orne et al., 1986). The CES-D has a convergent validity estimate of .81 with Beck Depression Inventory and .90 with the Zung Measure of Depression (Weissman, et al.,1975).

Penn State Worry Questionnaire (PSWQ). The PSWQ (Meyer, Miller, Metzger & Borkovec, 1990) is a 16-item scale that measures the trait of worry. Individuals respond on a scale ranging from 1 ("not at all typical of me") to 5 ("very typical of me"). A sample item is "My worries overwhelm me." A single total worry score is obtained; higher scores indicate greater pathological worrying. Studies have revealed a Cronbach's alpha of .93 and a test-retest

reliability estimate of .84 (Molina & Borkovec, 1994; Stober, 1995). The convergent validity of the PSWQ was .63 with the Worry Domains Questionnaire (Stober, 1995) and.55 with the Student Worry Scale (Davey, Hampton, Farrell & Davidson, 1992).

COPE. The COPE (Carver, Scheier & Weintraub, 1989) is a 60-item questionnaire that measures responses to stressful situations. The scale uses a 4-point Likert scale, which ranges from 1 ("I usually don't do this at all") to 4 ("I usually do this a lot"). The scale contains 15 subscales: active coping, planning, restraint coping, seeking social support, suppression of competing activities, seeking social support, positive reinterpretation and growth, acceptance, religion, venting emotions, denial, behavioral disengagement, mental disengagement, alcohol and humor. Second order factor analyses conducted on the subscales of the COPE using a three-factor model (Cook & Heppner, 1997). They found that the subscales of the COPE loaded on three latent factors (a) Problem-focused coping strategies: planning (.78), active coping (.78), positive reinterpretation and growth (.65), suppression of competing activities (.64), restraint coping (.44), acceptance (.41). (b) Emotion focused coping strategies: seeking emotional support (.88), seeking instrumental social support (.70), (c) Avoidance coping strategies: denial (.54) mental disengagement (.53) and behavioral disengagement (.46) and alcohol and drug use (.32). Humor and religion did not load on any of the three latent factors (Cook & Heppner, 1997). Carver and colleagues (1989) also found venting of emotions to load on the cluster of emotion focused coping strategies. Thus, for the present study, the subscales of COPE were grouped into 3 clusters: problem-focused (planning, active coping, positive reinterpretation and growth, suppression of competing activities, restraint coping and acceptance), emotion focused (seeking instrumental and emotional social support and venting)

and avoidance coping (denial, mental and behavioral disengagement) were used. The scale has sound psychometric properties. The Cronbach's alphas for the individual scales range from .45 to .92 and the test-retest reliability estimates range from .46 to .86 (Carver, Scheier & Weintraub, 1989).

Results

The current study assessed the relationship between self-compassion, psychopathology symptoms, and coping styles. Three mediated models were investigated in which coping styles (Problem-Focused, Emotion-Focused and Avoidance-Oriented Coping) were the predictor or independent variables and psychopathology symptoms (Social Anxiety, Worry and Depression) were the outcomes or dependent variables. In all the three models, self-compassion was tested as a mediator in the relationship between coping styles and psychopathology.

Descriptive Statistics

Descriptive statistics such as mean, median, range and standard deviation were conducted first. Means of the various groups based on gender and ethnicity were compared using independent t-test or one-way ANOVA. Chronbach's α's were calculated for each of the scales (CES-D, SIAS/SPS and PSWQ) to obtain a measure of internal consistency. Zero-order correlations were also computed for the main study variables.

The data set was examined using frequencies to identify and eliminate missing data (n = 23). Skewness and Kurtosis values were computed for all of the scales; values were found to

be in the acceptable range (See Table 1). The internal consistency of scales was calculated using Chronbach's α.

The Chronbach's α for the measures ranged from α = .39 (Mental Disengagement Scale of the COPE scale) to α = .95 (Social Phobia Scale). The high α's of the PSWQ (.91), SPS (.95), SIAS (.94) and CES-D (.90) were consistent with prior research. The Chronbach's α's of the overall scale and the subscales of the Self-Compassion Scale were found to be slightly lower than those reported in the study by Neff (2003a). The Chronbach's α's for the subscales of the COPE ranged from α = .39 (Mental Disengagement) to α =.90 (Religious Coping). The Chronbach's α of the Mental Disengagement scale was found to be much lower than the Chronbach's α reported by Carver, Scheier and Weintraub (1989). The means, standard deviations and the ranges of the scores on all the measures are also reported in Table 1.

A t-test for independent means was conducted on the scores on the Self-Compassion Scale to compare males and females. At an alpha level of .05, there was no statistically significant difference between the scores obtained by males (*M = 3.05, SD = .59*) and females (*M= 3.10, SD = .48*), $t(145) = -.493$, $p = .169$ (two-tailed).

One–way analysis of variance (ANOVA) was conducted on the scores on the Self-Compassion Scale obtained by participants belonging to various ethnic backgrounds. At an alpha of .05, no significant differences were found in the scores on Self-Compassion, $F(5, 141) = .290$, $p = .918$.

Cut-off scores for the CES-D, PSWQ, and SIAS/SPS were used to identify the degree of psychopathology in this college sample. On the CES-D, participants who score above 16

experience are classified as experiencing 'significant' symptoms of depression (Radloff, 1977). For non-clinical populations like college students, researchers have suggested that a cutoff score of 16 may yield inflated estimates of the occurrence of depression (Roberts, Lewinsohn & Seeley, 1991; Santor, Zuroff, Ramsay, Cervantes & Palacios, 1995). Several studies have found that a cutoff of 27 is more appropriate for college samples (Houston, Cooper & Ford, 2002; Zich, Attkinson & Greenfield, 1990). Using a cutoff of 16, 45% of the sample was found to experience high depressive symptoms. Using a more conservative cutoff of 27, 14.96% of the sample was found to be in the high range. A cutoff score of 62 for the PSWQ has been found to be of optimal sensitivity and specificity (Behar, Alcaine, Zuelling & Borkovec, 2003; Fresco & Mennin, 2004). In this sample, 21% scored very high on worry. Cutoff scores of 36 for the SIAS and 26 for the SPS were used (Peters, 2000). Out of 147 participants, 30% scored in the high range on the SIAS and 30.6% of the participants scored high on the SPS. Thus, although a typical college sample was used, relatively high levels of psychopathology were present suggesting sample variability in terms of psychopathology.

According to Neff (2003; Neff 2009), individuals who score between 1 and 2.5 display low self-compassion, those who display moderate level of self-compassion score between 2.5 and 3.5 and those who score between 3.5 and 5.0 display high levels of self-compassion. The data revealed that 10.2% of the participants experienced low self-compassion and 89.8% experienced moderate levels of self-compassion. None of the participants scored high on the Self-Compassion Scale

Zero order correlations were computed for the main study variables measured in the study (See Table 2). Significant negative correlations were observed between the scores on

Self-Compassion and the scores on the depression (r = -.515, p = .01), worry (r = -.482, p = .01), social anxiety (r = -.474, p = .01) and avoidance-oriented coping (r = -.274, p = .01).

Hypotheses 1a and 1b were not supported as the correlations between the symptoms of depression and emotion-focused coping (r = .049, p = .56) and self-compassion and emotion-focused coping (r = .095, p = .25) were not significant (see Table 2). Hypothesis 1c was supported as a significant negative correlation (r = -.515, p = .01) was obtained between self-compassion and the symptoms of depression measured by the CES-D.

Correlations between the main study variables revealed significant correlations between avoidance-oriented coping, scores on the CES-D and the scores on the Self-Compassion Scale (See Table 2). A mediated model was tested with avoidance oriented coping as the predictor, scores on the CES-D as the outcome variable and scores on the Self-Compassion Scale as the mediator.

Hypothesis 2a was supported as a significant positive correlation (r = .514, p = .01) was obtained between avoidance oriented coping and the scores on SIAS/SPS. Hypotheses 2b and 2c were also supported as significant negative correlation was obtained between self-compassion and avoidance oriented coping (r = -.274, p = .01) and self-compassion and the symptoms of social anxiety (r = -.474, p = .01).

Hypothesis 3a was not supported as the correlation between problem-focused coping and the scores on the PSWQ was not significant (r = -.121, p = .144). Hypotheses 3b and 3c were supported as self-compassion was found to have a significant positive correlation with

problem- focused coping ($r = .416, p < .001$) and a significant negative correlation with the scores on the PSWQ ($r = -482, p <. 001$).

Main Hypotheses

Mediation analyses were conducted to test the three main hypotheses using the steps proposed by Baron and Kenny (1986 & Kenny, D. A., 2013). In step 1 (See Figure 1), linear regression was conducted to establish whether the coping style (predictor) significantly predicted the symptoms of psychopathology (outcome). Linear regression was conducted in step 2 to test whether the coping style (predictor) was a significant predictor of self-compassion (mediator). For step 3 multiple linear regression was conducted to test whether self-compassion (mediator) was the significant predictor of the symptoms of psychopathology (outcome) while controlling for the effect of the coping style (predictor). Step 4 tests the relationship between the coping style (predictor) and the symptoms of psychopathology (outcome) while controlling for the effect of self-compassion (mediator). This step establishes whether self-compassion is a full or a partial mediator in the relationship between coping style and the symptoms of psychopathology.

Hypothesis 1 examined self-compassion as a mediator between coping strategies and the symptoms of depression (See Figure 5). In step 1 of the mediation analysis, emotion focused coping was not a significant predictor of the scores on CES-D ($\beta = .049, t(145) = .590, p = .556$). In step 2, emotion focused coping was not a significant predictor of scores on the Self-Compassion Scale ($\beta = .095, t(145) = 1.154, p = .250$). In step 3, self-compassion was a negative predictor of scores on the CES-D while controlling for emotion-focused coping ($\beta = -.525, t(144) = -7.363, p < .001$). For a mediation analysis to be conducted, the results of the

first three steps need to be significant; thus self-compassion was not found to be a mediator in the relationship between emotion-focused coping and the symptoms of depression.

Self-compassion was examined as a potential mediator in the relationship between avoidance oriented coping and the symptoms of depression (See Figure 8). In step 1 of the mediation analysis. Avoidance-oriented coping was found to be a significant predictor of the scores on CES-D (β = .476, $t(145) = 6.522$, $p < .001$). In step 2, avoidance oriented coping was found to be a significant predictor of scores on Self-Compassion (β = -.274, $t(145) = -3.432$, $p = .001$). In step 3, the scores on Self-Compassion were a significant predictor of the scores on the CES-D while controlling for the effect of avoidance-oriented coping (β = -.416, $t(144) = -6.131$, $p = < .001$). The relationship between avoidance oriented coping strategies and the scores on CESD was weaker (β = .362, $t(144) = 5.339$, $p < .001$) as compared to the direct relationship (β =.476). Sobel's test revealed that Self–Compassion was found to be a significant partial mediator in the relationship between avoidance oriented coping and the scores on the CES-D ($z = 2.89$, $p = .004$).

Hypothesis 2 examined the role of self-compassion as a mediator between avoidance oriented coping and the symptoms of social anxiety (See Figure 6). To test the mediated model in hypothesis 2d, zero-order correlations were conducted between the scores on avoidance - oriented coping, Self-Compassion Scale, and the SIAS/SPS. Significant correlations were obtained between all the variables (See Table 2). In step 1 of the mediation analysis, linear regression was conducted between the scores on avoidance-oriented coping (predictor) and the scores on the measures of the symptoms of social anxiety (outcome). Scores on avoidance-oriented coping significantly predicted scores on SIAS/SPS (β = .514, $t(145) = 7.217$, $p <$

.001). For step 2, linear regression was conducted between the scores on avoidance oriented coping (predictor) and the scores on the Self-Compassion Scale (mediator). The Scores on avoidance oriented coping significantly predicted scores on Self-Compassion (β = -.274, t(145) = -3.432, p = .001). In step 3 of the mediation analysis, multiple regression analysis was conducted to test whether the scores on the Self-Compassion Scale (mediator) significantly predict scores on the SIAS/SPS (outcome) while controlling for the scores on avoidance-oriented coping. The results of the multiple regression analysis revealed that the scores on Self-Compassion (mediator) was a significant predictor of scores on SIAS/SPS while controlling for the scores on avoidance-oriented coping (β = -.360, t(144) = 4.331, p < .001). The relationship between avoidance oriented coping strategies and the scores on SPS/SIAS was weaker (β = .415, t(144) = -5.296, p < .001) as compared to the direct relationship (β =.514) . Sobel's test revealed that self-compassion was a partial mediator in the relationship between avoidance-oriented coping and the scores on SIAS/SPS (z = 2.79, p = .005).

Hypothesis 3 examined the role of self-compassion as a mediator between problem-focused coping and the scores on the PSWQ (See Figure 7). In step 1 of the mediation analysis, problem-focused coping was not found to be a significant predictor of the scores on the PSWQ (β = -.121, t(145) = -1.469, p = .144). In step 2, problem-focused coping was found to be a significant predictor of scores on the Self-Compassion Scale (β = .416, t(145) = 5.514, p < .001). In step 3, self-compassion was found to be a significant predictor of scores on the PSWQ while controlling for the effect of problem-focused coping (β = -.522, t(144) = -6.539, p < .001). The mediation model was not supported as the result of the linear regression in step 1 was not significant.

Exploratory Analyses

Two additional mediated models were tested. The first mediated model was tested with social anxiety as the mediator, self-compassion as the predictor and avoidance-oriented coping as the outcome variable (See Figure 10). In step 1 of the mediation analysis, self-compassion significantly predicted avoidance oriented coping (β = -.274, $t(145)$ = -3.435, p = .001). In step 2, self-compassion was a significant predictor of the symptoms of social anxiety as measured by SIAS/SPS (β = -.474, $t(145)$ = -6.482, p <.001). In step 3, the symptoms of social anxiety were found to be significantly predict avoidance oriented coping while controlling for the effect of self-compassion (β = .495, $t(144)$ = 6.109, p < .001). The relationship between self-compassion and avoidance oriented coping was found to be non significant after adding social anxiety into the regression analysis (β = -.039, $t(144)$ = -.484, p = .629). Thus, the symptoms of social anxiety fully mediated the relationship between self-compassion and avoidance-oriented coping.

The second mediated model tested the relationship between self-compassion as the predictor, avoidance-oriented coping as the outcome and the symptoms of depression as measured by the CES-D as the mediator (See Figure 9). In step 1 of the mediation analysis, self-compassion was a significant predictor of avoidance-oriented coping (β = -.274, $t(145)$ = -3.435, p = .001). In step 2 self-compassion significantly predicted the scores on the CES-D (β = -.515, $t(145)$ = -7.240, p < .001). In step 3, the symptoms of depression significantly predicted avoidance-oriented coping while controlling for self-compassion (β = .456, $t(144)$ = 5.339, p < .001). In the last step, the relationship between self-compassion and avoidance coping was found to be non significant after adding the scores on the CES-D into the

regression analysis (β = -.039, $t(144)$ = -.457, p = .648). Thus, the symptoms of depression fully mediated the relationship between self-compassion and avoidance-oriented coping.

After analyzing the zero-order correlations a potential moderated model was identified and tested. The model tested the relationships between emotion-focused coping (predictor), self-compassion (moderator) and scores on the PSWQ (outcome; See Figure 11). A hierarchical regression analysis revealed that the interaction term between emotion focused coping and self-compassion did not produce a significant variance in the scores on the PSWQ (ΔR^2 =. 010, ß = -.100, $t(143)$ = 1.437, p = .153).

Discussion

This research paper examined the relationship between self-compassion, coping styles (problem-focused coping, emotion-focused coping and avoidance-oriented coping) and symptoms of psychopathology (social anxiety, worry and depression). Mediated models were used to study the role of self-compassion as a mediator between coping styles and symptoms of psychopathology. The results of the study are discussed in the following section.

Self-compassion involves responding to failure, pain or suffering by being kind and forgiving of oneself, without being extremely self-critical and by recognizing that suffering is a part of the human condition and that other individuals in the world also experience unpleasant life circumstances (Neff 2003a). Self-compassion also entails the ability to be mindful of ones present emotions without over identifying and being overwhelmed by one's emotional response to failure or suffering (Neff, 2003a). In this study, self-compassion was measured by using the Self-Compassion Scale developed by Neff (2003a). This scale has six subscales: self-

kindness, self-judgment, isolation, common humanity, mindfulness and over identification. The overall scores on self-compassion were used in this study.

Relationships between self-compassion, coping styles and the symptoms of psychopathology

Self-compassion was related negatively to social anxiety, worry and depression. This indicates that individuals who respond to negative life events or situations with self-compassion rather than self-criticism, depressive rumination and feelings of isolation are more likely to experience lower severity of depressive symptoms. Self-compassion also diminishes anxiety about anticipated future events thereby reducing pathological worry. Self-compassion reduces the tendency to be fearful of being judged by others and harsh self-criticism which are the hallmarks of social anxiety (Werner, et al., 2010).

Self-compassion also was correlated positively with problem-focused coping and correlated negatively with avoidance-oriented coping. Individuals who respond to problematic situations with self-compassion seem to be motivated to use proactive problem-focused coping strategies to resolve the potential cause of the problem rather than ignoring its existence and allowing the situation to worsen. These findings add to previous research that self-compassion enhances psychological wellbeing and helps individuals to cope effectively with negative emotions and experiences (Leary et. al., 2007) and diminishes the severity of the symptoms of psychopathology (Van Dam, Sheppard, Forsyth & Earleywine, 2011).

Though self-compassion and emotion focused coping were not related, self-compassion was associated positively with the coping strategy of 'seeking instrumental social support,'

which is a component of emotion-focused coping. Seeking social support to overcome distress has been found to be instrumental in reducing distress in research conducted among college age populations (Chao, 2011). Emotion-focused coping also was correlated positively with avoidance oriented coping and worry. Research findings on the efficacy of emotion-focused coping have been mixed. Emotion-focused coping might provide the individual with temporary respite from the stressful situation by reducing emotional distress but it typically does not provide a lasting solution to the problematic situation, which could explain the lack of a relationship between emotion-focused strategies, and self-compassion and the positive relationship between worry and emotion-focused coping.

With respect to coping styles and psychopathology, social anxiety was linked negatively to the use of problem-focused strategies and positively to the use of avoidance-oriented coping. Individuals who experience social anxiety often consciously avoid social situations due the fear of being scrutinized by others. Thus, avoiding the situation might momentarily reduce the anxiety and distress; however, this behavior might reduce 'social effectiveness' (Vasey & Daleiden, 1996). Problem-focused coping allows the person to cope actively with social anxiety through techniques such as planning, developing positive interpretations of the situation, focusing solely on the interaction partner, and so forth, which tend to enhance social interactions (Erath, Flanagan & Bierman, 2007) and reduce internalizing symptoms associated to social anxiety (Compass, et al., 2001).

Worry was associated positively with the use of emotion-focused coping strategies. Individuals who regularly depend on emotion-focused coping display heightened levels of emotional distress and worry (Matthews, Schwean, Campbell, Saklofske & Mohamed, 2000).

A positive link was obtained between focus on venting emotion and worrying; venting can extend the effect of negative emotions as the person resorts to talking about his/her negative emotions but fails to resolve the issue causing the distress. Venting could perpetuate worrying as it can be considered as a more external form of rumination (Nolen-Hoeksema, Parker & Larson, 1994).

Finally, depression was linked negatively with the use of problem-focused strategies and avoidance-oriented coping. According to the learned helplessness model of depression (Abramson, Seligman & Teasdale, 1978), individuals who experience depression tend to judge difficult situations to be impossible to resolve and feel the need to seek information and support from external sources. They have an inherent belief that they are helpless, inept and lack the resources necessary to use action oriented problem-focused coping strategies (Coyne, Aldwin & Lazarus, 1981). In some cases, avoidance-oriented coping has been found to enhance the wellbeing of individuals experiencing depression (Park &Adler, 2003). Avoidance oriented strategies help to divert the individual's attention away from ruminating about the negative emotions associated with depression (Shikai, Uji, Chen, et. al., 2007).

Social anxiety was associated with worry and depressive symptoms. Social anxiety is associated to significant levels of isolation, negative affect and suicidal ideation, which could lead to severe symptoms of depression (Davidson, Hughes, George & Blazer, 1994). Individuals experiencing social anxiety also experience high levels of anticipatory anxiety and worry excessively about anticipated social interactions such as social interaction or public speaking (Clark, 1997; Barlow et.al., 1996). According to the cognitive theory of anxiety, individuals who experience high levels of anxiety misinterpret a situation as being extremely

negative and underestimate their ability to cope effectively with the situation thereby enhancing the severity of the symptoms of anxiety and social phobia (Beck, Emery & Greenberg, 1985).

Depression was associated negatively with worry. According to the cognitive content-specificity hypothesis (Clark, Beck & Brown, 1989), persons experiencing anxiety experience excessive fear of anticipated future events or danger. On the other hand, depressive symptoms are strongly associated with self-deprecating thoughts and a cynical view of oneself (Clark, Beck & Brown, 1989). Thus, this difference in the cognitive structures underlying depression and pathological worry may explain the negative correlation between depressive symptoms and worry.

Role of self-compassion as a mediator

The association between self-compassion, coping styles and the symptoms of psychopathology has not been reviewed in existing literature. Three mediated models were tested; one model was upheld. Self-compassion was a partial mediator between avoidance-oriented coping and social anxiety. This indicates that lower levels of avoidance-oriented coping engender higher levels of self-compassion, which in turn lowers the severity of the symptoms of social anxiety. However, a partial mediation indicates that factors other than coping strategies such as the nature of the problematic event or the resilience of the individual could influence the levels of self-compassion. Although the mediation analysis was statistically significant, the observed reduction ($\beta = .415$ versus $\beta = .514$) in the association between avoidance-oriented coping and social anxiety may not be meaningful . This could be due to the strong negative association between avoidance-oriented coping and social anxiety. Self-

compassion reduces the symptoms of social anxiety but the lower use of avoidance-oriented strategies to cope with the fear of social situations might be more effective in reducing anxiety.

After examining the preliminary results, an alternative mediated model was identified. Self-compassion was a partial mediator in the relationship between avoidance-oriented coping and depression. This relationship is difficult to explain as a negative association was identified between avoidance-oriented coping and depression. It could be that the coping strategy of distracting oneself from engaging in depressive rumination is highly effective in lowering depression. Perhaps self-compassion along with avoidance-oriented coping could be effective in reducing depressive symptoms.

Self-compassion was not a mediator in the relationship between emotion-focused coping and depression. However, higher levels of self-compassion were associated with lower levels of depression and worry which may be indicative of the buffering effects of self-compassion. The lack of an association between emotion-focused coping and self-compassion could possibly be explained by the fact that emotion-focused strategies are externally oriented as the person tries to reduce negative emotions through seeking social support and sharing her or his emotions with others. Self-compassion on the other hand is self-oriented and requires the person to be kind and forgiving towards oneself and keep one's emotion in mindful awareness rather than being overwhelmed by them and using venting to deal with negative affect.

The mediated model between self-compassion, problem-focused coping, and worry was not upheld. Perhaps self-compassion separately enhances adaptive problem-focused coping and

reduces pathological worry. , This finding adds to the rapidly growing literature on the role of self-compassion in enhancing psychological wellbeing.

This study examined self-compassion in a sample of college students. A majority of the sample displayed moderate levels of self-compassion. This finding is supported by previous research using samples of undergraduate participants (Neff, 2003a; Ying, 2009). According to Neff (2003a) undergraduate students lack maturity and habitually respond to the stress experienced in college through self-criticism. The mean of the scores on the Self-Judgment scale (M = 3.11) obtained in this study was comparable to studies using college students (M = 3.21, Ying 2009; M = 3.07, Neff, 2003a). Though one may assume that people who score high on self-compassion may be highly self-absorbed, previous research has shown that self-compassion does not engender narcissism as it helps to develop a balanced self-concept (Neff & Vonk, 2009). Emerging adults score less than older adults as they are in the process of developing a self-identity and understanding interpersonal relationships (Grotevant & Cooper, 1985). Maturity and experience help older adults to be empathetic and respond to the suffering of others and maintain their ability to be self-compassionate at the same time (Neff & Pommier, 2012). College students find it difficult to find a balance between self and other focused concern, which adversely affects their ability to be self-compassionate (Neff & Pommier, 2012). However, the significant negative association between moderate levels of self-compassion and symptoms of psychopathology found in this study supports the efficacy of responding to negative experiences with self-compassion in reducing distress caused by psychopathology among college students.

Interesting results were obtained after conducting exploratory analyses using symptoms of social anxiety and depression as mediators between self-compassion and avoidance-oriented coping. Both symptoms of social anxiety and depression fully mediated the relationship between self-compassion and avoidance-oriented coping. This indicates that if a person responds to a stressful situation with self-compassion, then she/he is less likely to experience severe symptoms of social anxiety, which in turn may reduce the person's tendency to use maladaptive avoidance-oriented coping strategies. A negative association was found between depression and avoidance-oriented coping. It could be that self-compassion reduces depression by helping the individual to avoid engaging in depressive rumination. However, these results are conditional and definitive conclusions cannot be drawn from the data.

Two moderated models were tested after analyzing the relationships between the main study variables. Self-compassion was not found to affect the relationship between emotion-focused coping and worry. This finding could be due to a lack of variation in the scores on self-compassion it does not alter the nature of the relationship between emotion-focused coping and worry.

Limitations of the study

This study had certain limitations. The average time to complete the study was about forty minutes, however some participants took ten to fifteen minutes to complete the survey. The study was conducted online, which could have compromised the quality of the data due to a lack of attention paid by the participant to the questions presented online. However, there is no way to identify participants who lacked the motivation to respond to each question genuinely. Several participants also chose not to complete the questionnaires; as the study was

online, no feedback could be collected from the participants. The reasons for not completing the survey could have been associated with the main variables being studied. The lack of such valuable feedback or information could have affected the outcome of the study. In addition, causality and the directionality of the relationship between coping, self-compassion and psychopathology could not be established due to the correlational nature of this study.

Clinical Implications

Though the results of this study are provisional, certain tentative conclusions can be drawn. This study supports previous research on the buffering effects of self-compassion against the symptoms of psychopathology. The negative associations between self-compassion and internalizing disorders such as anxiety and depression could support the utility of using self-oriented concepts like self-compassion in reducing the distress caused by mental health disorders. The associations obtained between self-compassion and coping indicated that self-compassion could be related to lower levels of maladaptive avoidance-oriented coping and higher levels of proactive problem-focused coping.

A college sample was used in this study. Results suggest that even emerging adults have the ability to use the aspects of self-compassion to deal with negative and stressful situations (Neff, 2003a; Neff, Kirkpatrick & Rude, 2007). These findings add to the rapidly growing literature supporting the utility of using concepts like self-compassion in therapy to enhance the wellbeing of students in the college setting.

Little research has been conducted on the association between coping and self-compassion. The results of this study shed light on the association between self-compassion

and adaptive problem-focused coping and maladaptive avoidance-oriented coping. The knowledge of such an association can be used to assist an individual to enhance her/his coping resources.

Suggestions for Future Research

In this study self-compassion was conceptualized primarily as a personality feature used by the individual to cope with negative life circumstances. Future studies could use techniques to actually induce a self-compassionate state in the individual or teach people to consciously use the aspects of self-compassion to deal with a negative situation. Comparing the results of the two studies would provide researchers with an insight into differences in the levels of psychopathology with and without specific training in the use of techniques to enhance self-compassion. In a larger study, the data obtained from the COPE could be subjected to exploratory factor analysis to identify clusters of coping strategies and their association to self-compassion.

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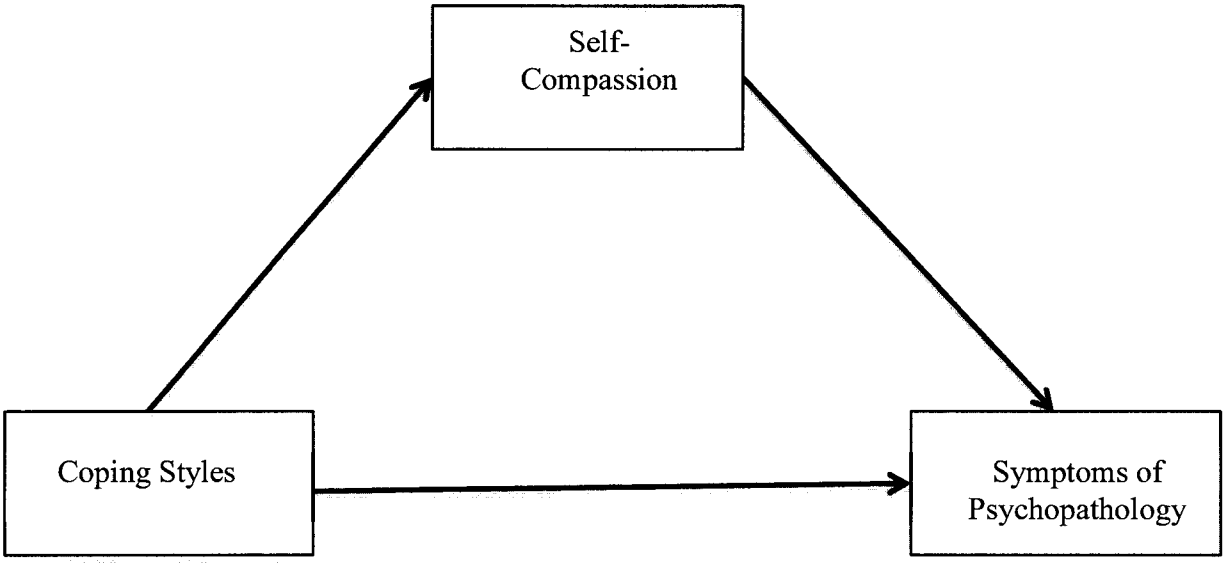

Figure 1: Hypothesized mediated model between self-compassion, coping strategies and the symptoms of psychopathology.

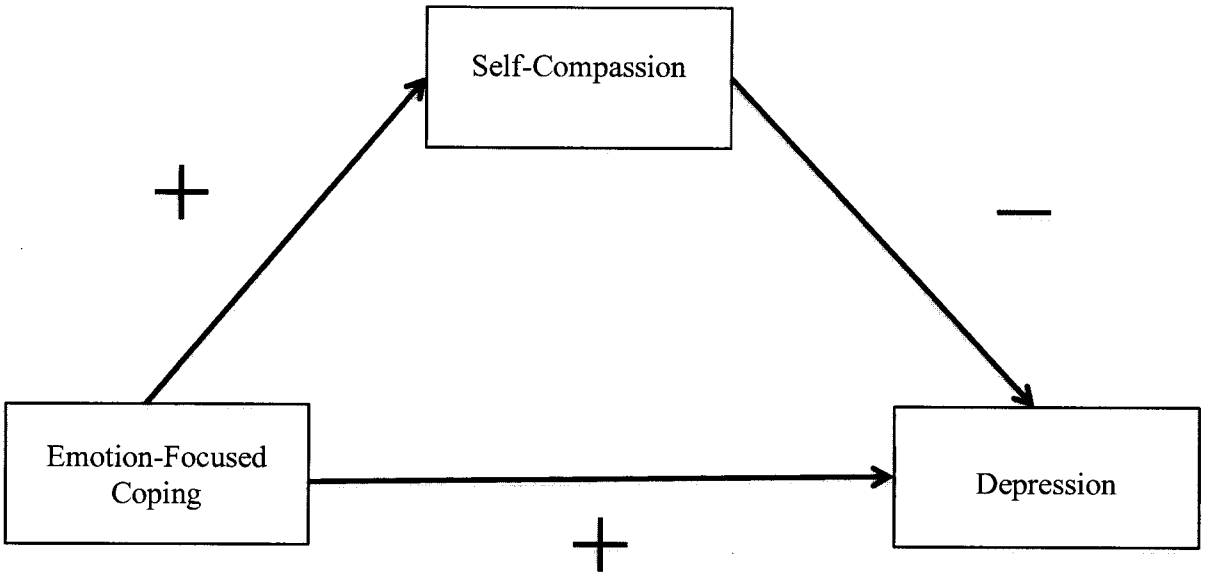

Figure 2: Hypothesized mediated model between self-compassion, emotion-focused coping and the symptoms of depression.

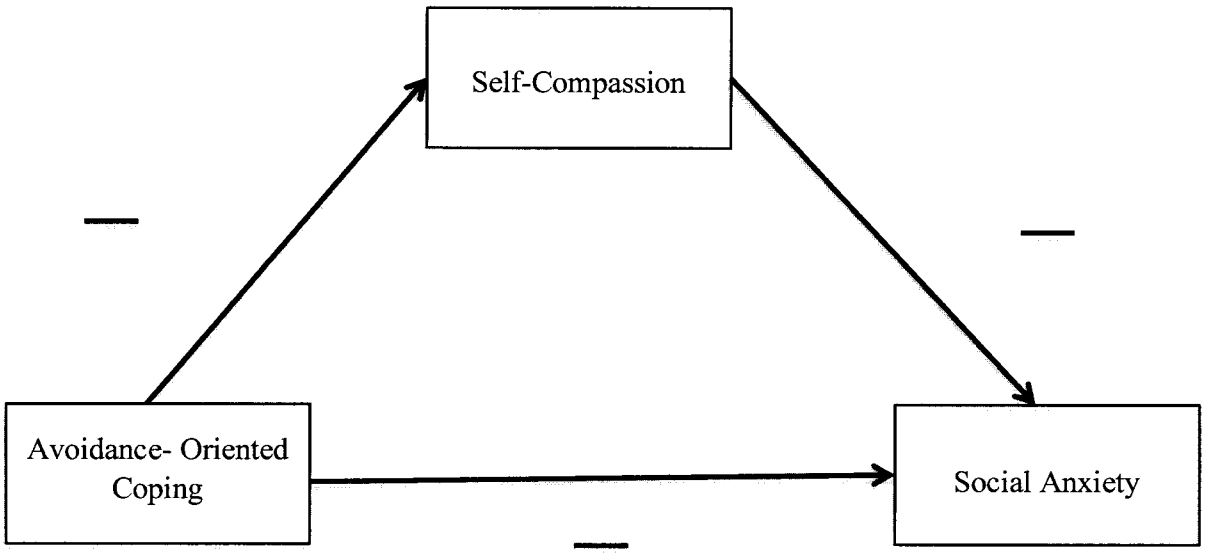

Figure 3: Hypothesized mediated model between self-compassion, avoidance-oriented coping and symptoms of social anxiety.

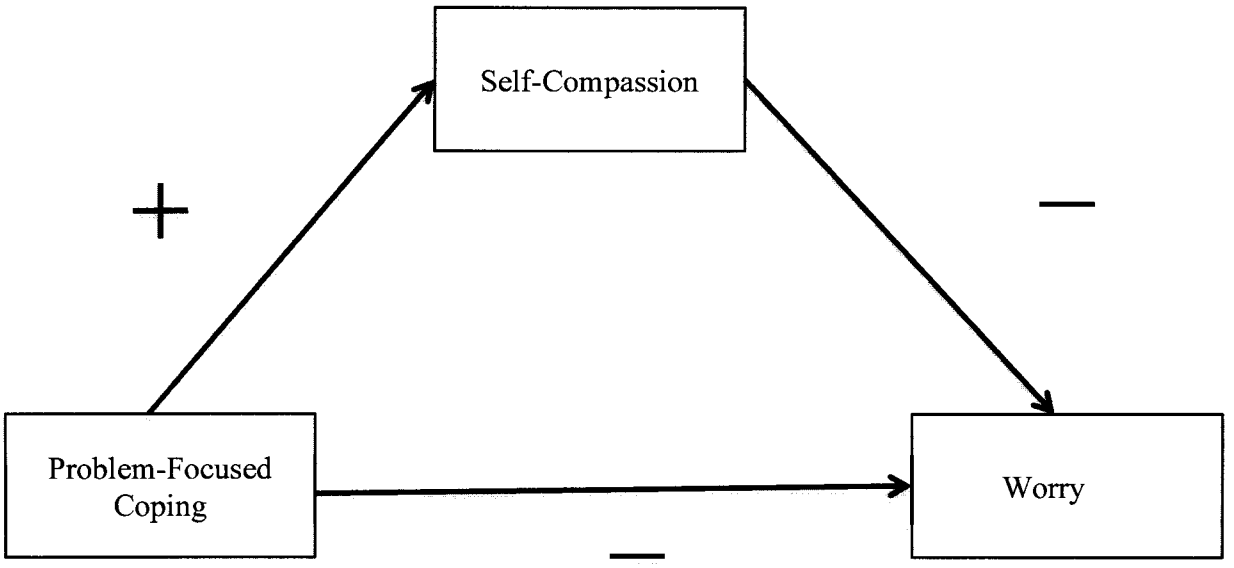

Figure 4: Hypothesized mediated model between self-compassion, problem-focused coping and worry.

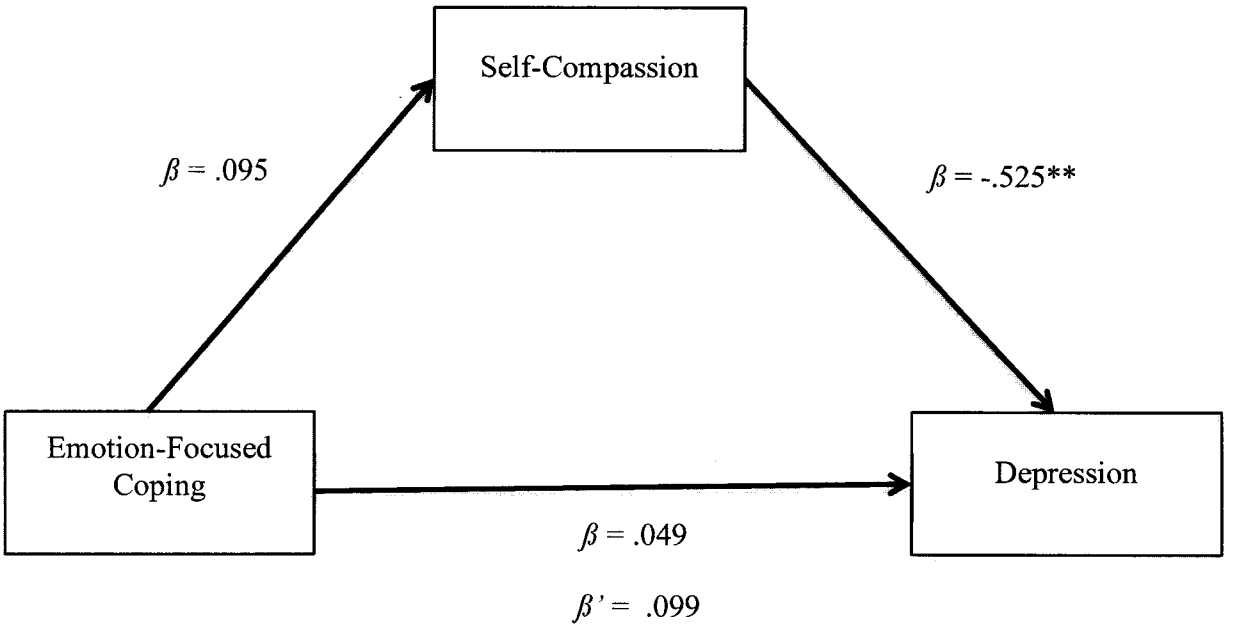

Figure 5: Mediated model between self-compassion, emotion-focused coping and the symptoms of depression.

**p <.001, $ß$ = direct path, $ß'$ = mediated path

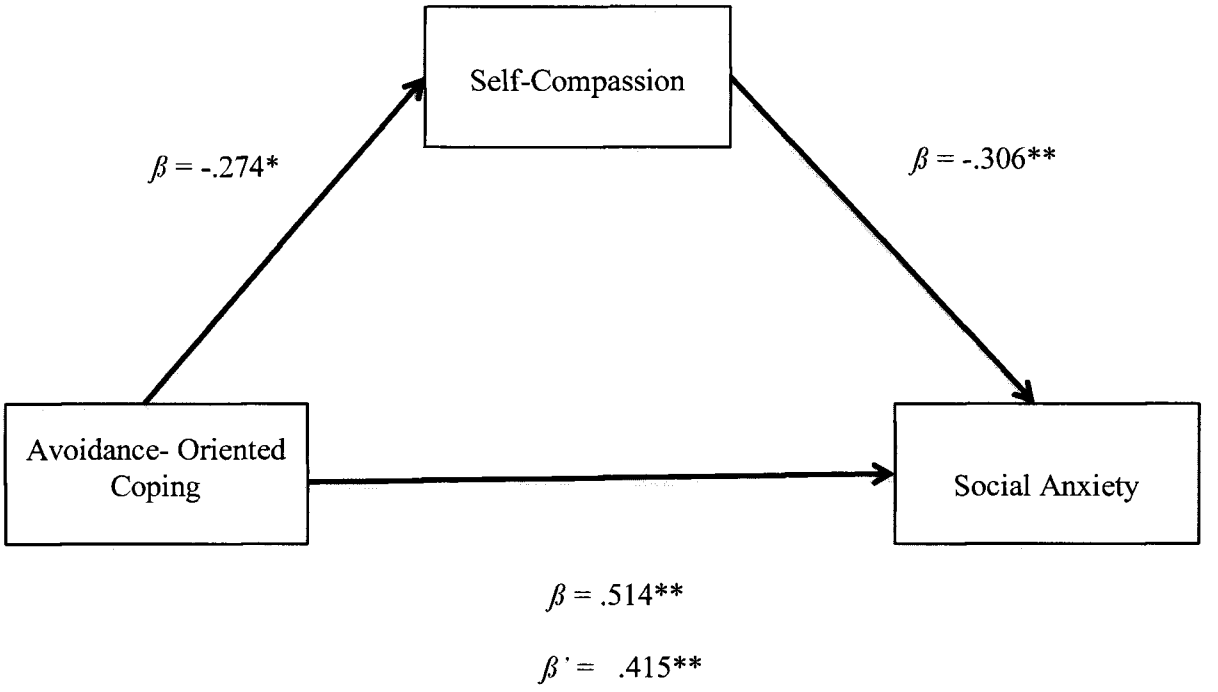

Figure 6: Mediated model between self-compassion, avoidance-oriented coping and symptoms of social anxiety.

*p = .001, **p < .001, β = direct path, β' = mediated path

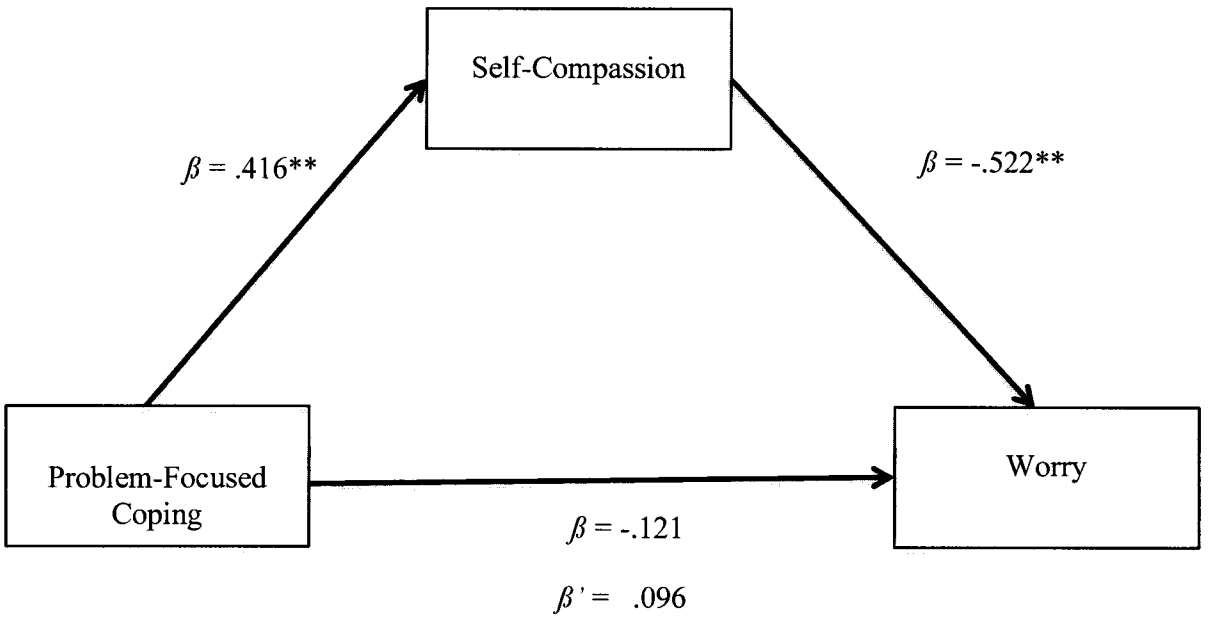

Figure 7: Mediated model between self-compassion, problem-focused coping and the worry.

**$p < .001$, $ß$ = direct path, $ß'$ = mediated path

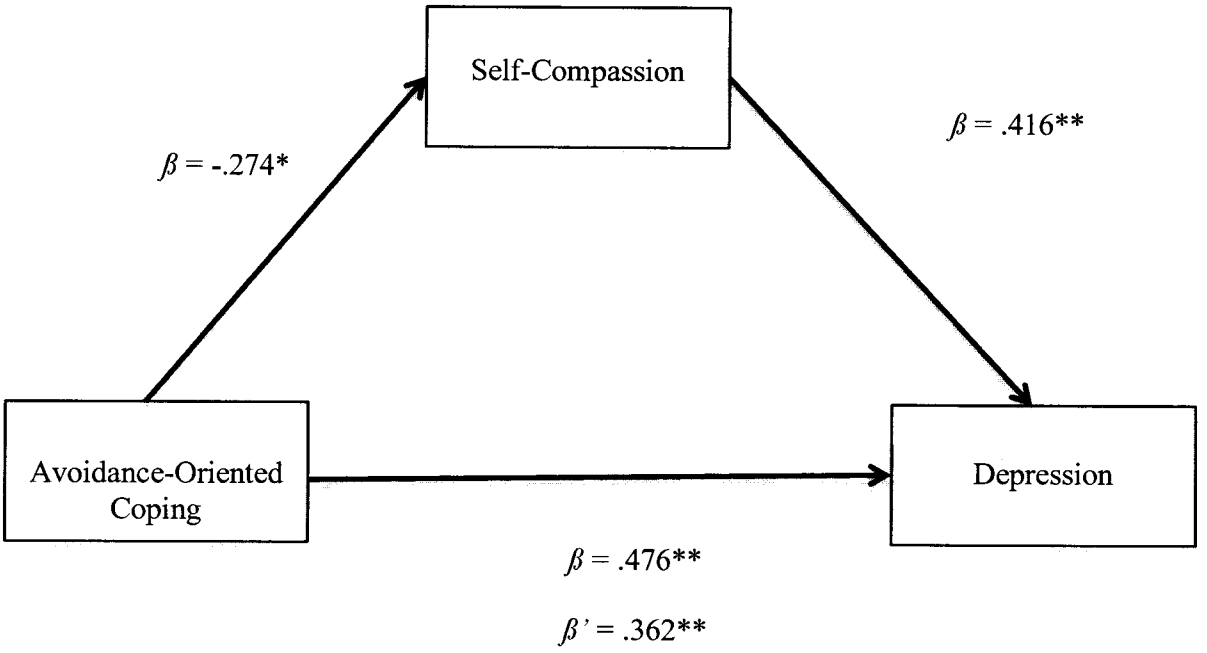

Figure 8: Mediated model between self-compassion, avoidance-oriented coping and the symptoms of depression.

*p = .001, **p < .001, ß = direct path, ß' = mediated path

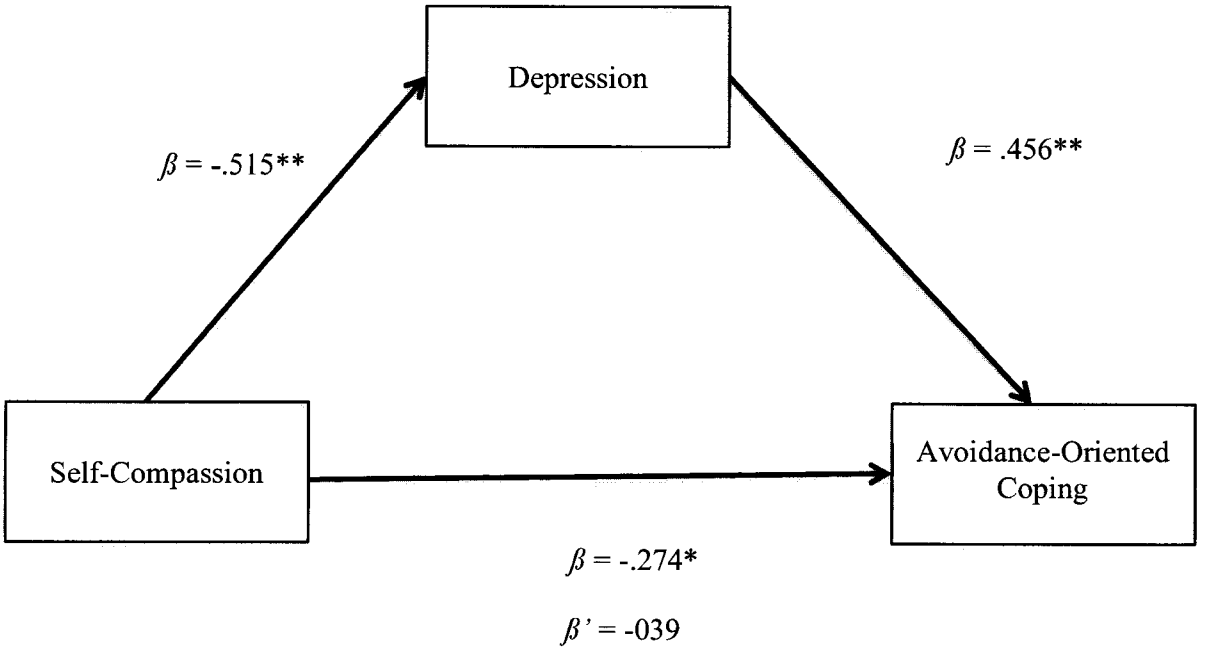

Figure 9: Mediated model between the symptoms of depression, self-compassion and avoidance-oriented coping.

*p = .001, **p < .001, $ß$ = direct path, $ß'$ = mediated path

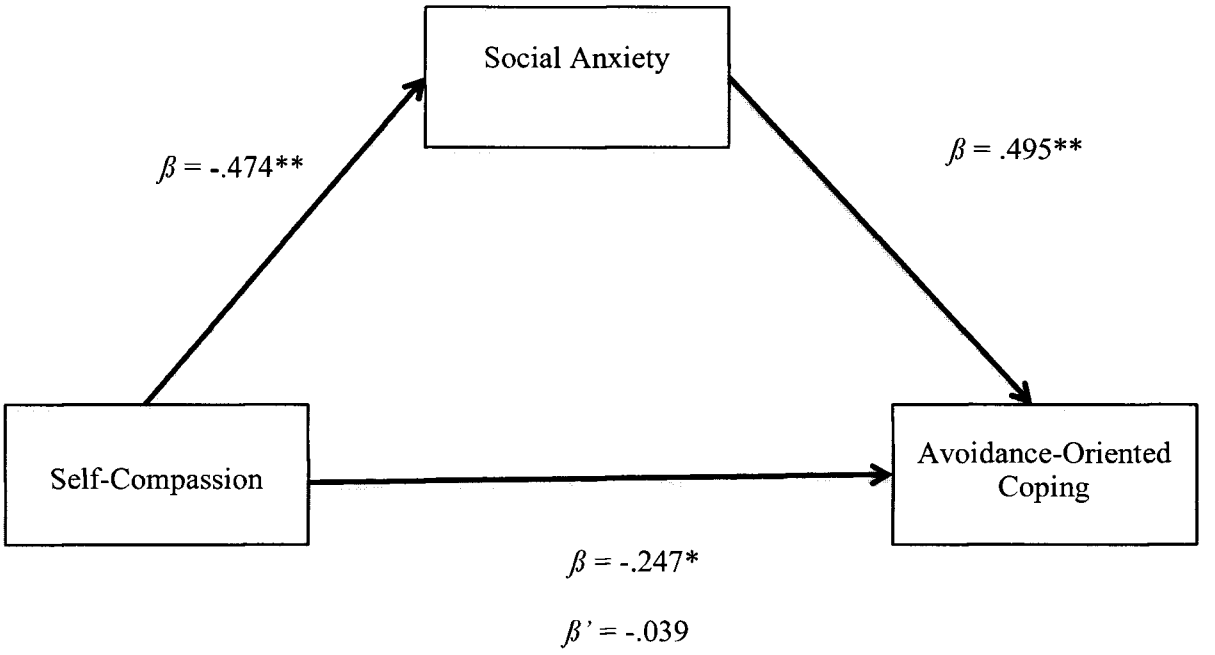

Figure 10: Mediated model between the symptoms of social anxiety, self-compassion and avoidance-oriented coping.

*p = .001, **p < .001, $ß$ = direct path, $ß'$ = mediated path

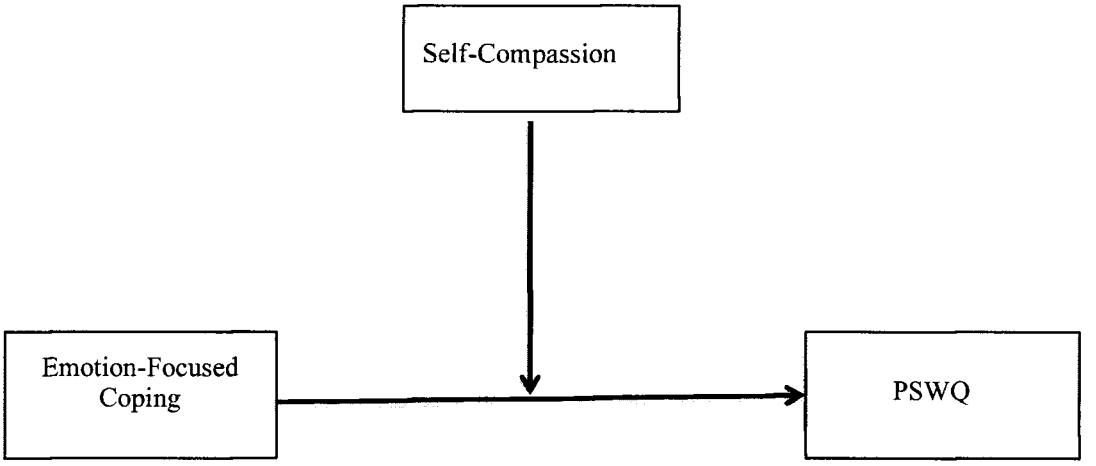

Figure 11: Moderated model between self-compassion, emotion focused coping and worry

Table 1

Descriptive Statistics and Internal Consistencies of Various Measures (N=147)

Measure	M	SD	Range	Chronbach's α	Skewness	Kurtosis
Self-Compassion	3.08	.52	1.54-4.60	.88	.199	.866
Self-Judgment	3.11	.94	1-5	.83		
Isolation	3.20	.94	1-5	.79		
Over-Identification	2.92	.49	1-5	.78		
Self-Kindness	3.04	.86	1-5	.83		
Common Humanity	2.96	.87	1-5	.75		
Mindfulness	3.26	.84	1-5	.73		
CES-D	16.11	10.68	0-50	.90	.816	.269
PSWQ	49.35	13.23	19-80	.91	.232	-.195
SIAS	25.73	16.52	1-72	.94	.614	-.445
SPS	20.52	17.44	0-78	.95	.964	.604
COPE						
Positive Reinterpretation and Growth	11.76	2.70	4-16	.76	-.299	-.368
Mental Disengagement	10.20	2.32	4-16	.39	.021	-.086
Venting	9.79	2.97	4-16	.72	-.029	-.399
Instrumental Social Support	10.76	3.19	4-16	.81	-.064	-.775
Active Coping	10.84	2.31	4-16	.60	-.215	.137

Denial	6.67	2.72	4-14	.78	.701	-.650
Religious Coping	9.24	4.03	4-16	.90	.179	.397
Humor	9.74	3.42	4-16	.87	.044	-.833
Behavioral Disengagement	7.12	2.79	4-15	.75	.607	-.624
Restraint	9.87	2.35	4-16	.58	-.016	-.107
Emotional Social Support	10.63	3.69	4-16	.88	-.079	-1.031
Substance Use	10.28	2.97	4-16	.88	1.337	1.282
Acceptance	11.14	2.94	4-16	.76	-.283	-.519
Suppression of Competing Activities	9.52	2.37	4-16	.61	.086	.329
Planning	11.07	2.82	4-16	.76	.017	-.581
Problem Focused	31.17	10.94	24-91	.87		
Emotion Focused	64.21	8.73	12-48	.91		
Avoidance Oriented	24.00	12-39	27	.79		

Note. CES-D = Center for Epidemiologic Studies Depression Scale; PSWQ = Penn State Worry Questionnaire; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale.

Table 2

Zero Order Correlations

	Self-Compassion	CES-D	PSWQ	SIAS/SPS	Prob-Foc	Emo-Foc	Avoid-Or
Self-Compassion							
CES-D	-.515**						
PSWQ	-.482**	-.442**					
SIAS/SPS	-.474**	.631**	.379**				
Prob-Foc	.416**	-.217**	-.121	-.253**			
Emo-Foc	.095	.049	.225**	-.027	.427**		
Avoid-Or	-.274**	-.476**	.156	.514**	.002	.227**	

** Correlation is significant at the .01 level (2-tailed).

Note. CES-D = Center for Epidemiologic Studies Depression Scale; PSWQ = Penn State Worry Questionnaire; SIAS = Social Interaction Anxiety Scale; SPS = Social Phobia Scale, Prob-Foc = problem-focused coping, Emo-Foc = Emotion-Focused coping, Avoid-Or = avoidance-oriented coping.

Self-Compassion Scale

How I Typically Act Toward Myself in Difficult Times

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner.

Almost never **Almost always**

1 2 3 4 5

_____ 1. I'm disapproving and judgmental about my own flaws and inadequacies.
_____ 2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
_____ 3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
_____ 4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
_____ 5. I try to be loving towards myself when I'm feeling emotional pain.
_____ 6. When I fail at something important to me I become consumed by feelings of inadequacy.
_____ 7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
_____ 8. When times are really difficult, I tend to be tough on myself.
_____ 9. When something upsets me I try to keep my emotions in balance.
_____ 10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
_____ 11. I'm intolerant and impatient towards those aspects of my personality I don't like.
_____ 12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
_____ 13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
_____ 14. When something painful happens I try to take a balanced view of the situation.
_____ 15. I try to see my failings as part of the human condition.
_____ 16. When I see aspects of myself that I don't like, I get down on myself.
_____ 17. When I fail at something important to me I try to keep things in perspective.

_____ 18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
_____ 19. I'm kind to myself when I'm experiencing suffering.
_____ 20. When something upsets me I get carried away with my feelings.
_____ 21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
_____ 22. When I'm feeling down I try to approach my feelings with curiosity and openness.
_____ 23. I'm tolerant of my own flaws and inadequacies.
_____ 24. When something painful happens I tend to blow the incident out of proportion.
_____ 25. When I fail at something that's important to me, I tend to feel alone in my failure.
_____ 26. I try to be understanding and patient towards those aspects of my personality I don't like.

Appendix B

Demographic Form

What is your sex?

- Male
- Female

How old are you?

- _____

What is your year in school?

- Freshman
- Sophomore
- Junior
- Senior

How do you usually describe yourself (can choose more than one)?

- Caucasian
- Black or African American
- Hispanic or Latino/a
- Asian or Pacific Islander
- American Indian, Alaskan Native, or Native Hawaiian
- Biracial or Multiracial
- Other

What is your marital status?

- Single
- Married/Partnered
- Separated
- Divorced

What is your approximate GPA at EIU?

- 3.5 – 4.0
- 3.0 – 3.49
- 2.5 – 2.99
- 2.0 – 2.49
- Below 2.0

How many close friends do you have?

- 0
- 1
- 2
- 3
- 4 or more

How many alcoholic drinks to you have in any given week?

- 0 – 4
- 5 – 8
- 9 – 12
- 12 or more

Have you ever used an illegal substance? In the last six months?

- Yes/Yes
- Yes/No
- No

Have you ever used a legal or prescription substance to get high?

- Yes
- No

Have you ever been a regular smoker?

- Yes
- No

How many hours a week do you spend exercising?

- 0 – 3
- 4 – 7
- 8 – 11
- More than 11 hours

How important is religion to you?

- Very important
- Important
- Indifferent
- Unimportant
- Very unimportant